40 NF

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08/09/2018 08:19 AM $0.00
Book - 10701 Pg - 2882-2921A
ADAM GARDINER
RECORDER, SALT LAKE COUNTY, UTAH
CITY OF DRAPER
1020 E PIONEER RD
DRAPER UT 84020
BY: NDA, DEPUTY - MA 40 P. 41 P.

When recorded, mail to:

Draper City Recorder
1020 East Pioneer Road
Draper City, Utah 84081

Affects Parcel No(s): 28-30-478-034-0000, 28-30-478-010-0000, 28-30-478-038-0000, 28-30-478-052-0000, 28-30-478-053-0000, 28-30-478-045-0000, 28-30-478-047-0000, 28-30-478-050-0000, 28-30-478-051-0000.

STORMWATER POLLUTION PREVENTION MAINTENANCE AGREEMENT

This Stormwater Pollution Prevention Maintenance Agreement ("Agreement") is made and entered into this 1 day of June, 20 18, by and between Draper City, a Utah municipal corporation ("City"), and 787, LLC, a Developer/owner ("Owner").

RECITALS

WHEREAS, the City is authorized and required to regulate and control the disposition of storm and surface waters, as set forth in the Draper City Municipal Code Chapter 16-2, as amended ("Ordinance"), adopted pursuant to the Utah Water Quality Act, as set forth in *Utah Code Ann.* §§ 19-5-101, *et seq.*, as amended ("Act"); and

WHEREAS, the Owner hereby represents and acknowledges that it is the owner in fee simple of certain real property more particularly described in Exhibit "A," attached hereto and incorporated herein by this reference ("Property"); and

WHEREAS, the Owner desires to build or develop the Property and/or to conduct certain regulated construction activities on the Property which will alter existing storm and surface water conditions on the Property and/or adjacent lands; or

WHEREAS, the Owner's existing property was completed after January 1, 2003; disturbed an area greater than or equal to one acre, or disturbed less than one acre and is part of a larger common plan of development or sale; and is served by a private on-site stormwater management facility; and

WHEREAS, in order to accommodate and regulate storm and surface water flow conditions, the Owner is required by federal, state, and local law to build and maintain at Owner's expense a storm and surface water management facility or improvements ("Stormwater Facilities"); and

WHEREAS, the Stormwater Facilities are more particularly described and shown in the final site plan or subdivision approved for the Property and related engineering drawings, and any amendments thereto, which plans and drawings are on file with the City and are hereby incorporated herein by this reference ("Development Plan"); and

WHEREAS, the summary description of all Stormwater Facilities, details and all appurtenance draining to and affecting the Stormwater Facilities and establishing the standard operation and routine maintenance procedures for the Stormwater Facilities, and control measures installed on the Property, ("Stormwater Maintenance and Preservation Plan") is more particularly shown in Exhibit "B" on file with the County Recorder's Office; and

WHEREAS, a condition of Development Plan approval, and as required as part of the City's Small MS4 UPDES General Permit from the State of Utah, Owner is required to enter into this Agreement establishing a means of documenting the execution of the Stormwater Maintenance and Preservation Plan; and

NOW, THEREFORE, in consideration of the benefits received and to be received by the Owner, its successors and assigns, as a result of the City's approval of the Stormwater Maintenance and Preservation Plan, and the mutual covenants contained herein, the parties agree as follows:

Section 1

Construction of Stormwater Facilities. The Owner shall, at its sole cost and expense, construct the Stormwater Facilities in accordance with the Development Plans and specifications, and any amendments thereto which have been approved by the City.

Section 2

Maintenance of Stormwater Facilities. The Owner shall, at its sole cost and expense, adequately maintain the Stormwater Facilities. Owner's maintenance obligations shall include all systems and appurtenances built to convey stormwater, as well as all structures, improvements, and vegetation provided to control the quantity and quality of the stormwater. Adequate maintenance, for purposes of this Agreement, is defined as good working condition so that the Stormwater Facilities are performing their design functions. The Owner shall, at its sole cost and expense, perform all work necessary to keep the Stormwater Facilities in good working condition.

Section 3

Annual Maintenance Report of Stormwater Facilities. The Owner shall, at its sole cost and expense, inspect the Stormwater Facilities and submit an inspection report and certification to the City. The purpose of the inspection and certification is to assure safe

and proper functioning of the Stormwater Facilities. The annual inspection shall cover all aspects of the Stormwater Facilities, including, but not limited to, the parking lots, structural improvements, berms, channels, outlet structure, pond areas, access roads, vegetation, landscaping, etc. Deficiencies shall be noted in the inspection report. The report shall also contain a certification by the Owner, or the Owner's officers, employees, agents, and representatives as to whether adequate maintenance has been performed and whether the structural controls are operating as designed to protect water quality. The annual inspection report and certification shall be due by July 31st of each year and shall be on forms acceptable to the City.

Section 4

City Oversight Inspection Authority. The Owner hereby grants permission to the City, its authorized agents and employees, to enter upon the Property and to inspect the Stormwater Facilities upon reasonable notice to the Owner of at least three business days. Such inspections shall be conducted in a reasonable manner and at reasonable times, as determined appropriate by the City. The purpose of the inspection shall be to determine and ensure that the Stormwater Facilities are being adequately maintained, are continuing to perform in an adequate manner, and are in compliance with the Act, the Ordinance, and the Stormwater Facilities Maintenance Plan.

Section 5

Notice of Deficiencies. If the City finds that the Stormwater Facilities contain any defects or are not being maintained adequately, the City shall send Owner written notice of the defects or deficiencies and provide Owner with a reasonable time, but not less than sixty (60) days, to cure such defects or deficiencies. Such notice shall be confirmed delivery to the Owner or sent certified mail to the Owner at the address listed with the County Tax Assessor.

Section 6

Owner to Make Repairs. The Owner shall, at its sole cost and expense, make such repairs, inspections, changes or modifications to the Stormwater Facilities as may be determined as reasonably necessary by the City within the required cure period to ensure that the Stormwater Facilities are adequately maintained and continue to operate as designed and approved.

Section 7

City's Corrective Action Authority. In the event the Owner fails to adequately maintain the Stormwater Facilities in good working condition acceptable to the City, the City may correct a violation of the design standards or maintenance needs by performing all necessary work to place the facility in proper working condition. Prior to commencing work the City shall have complied with Section 5 and given Owner a second notice to cure or correct within 15 days served according to the delivery methods described in Section 5

It is expressly understood and agreed that the City is under no obligation to maintain or repair the Stormwater Facilities, and in no event shall this Agreement be construed to impose any such obligation on the City. The actions described in this Section are in

addition to and not in lieu of any and all equitable remedies available to the City as provided by law for Owner's failure to remedy deficiencies or any other failure to perform under the terms and conditions of this Agreement.

Section 8

Reimbursement of Costs. In the event the City, pursuant to this Agreement, incurs any costs, or expends any funds resulting from enforcement or cost for labor, inspections, use of equipment, supplies, materials, and the like related to storm drain disconnection from the City system, the Owner shall reimburse the City upon demand, within thirty (30) days of receipt thereof for all actual costs incurred by the City. Owner shall also be liable for any collection costs, including attorneys' fees and court costs, incurred by the City in collection of delinquent payments.

Section 9

Successor and Assigns. This Agreement shall be recorded in the County Recorder's Office and the covenants and agreements contained herein shall run with the land and whenever the Property shall be held, sold, conveyed or otherwise transferred, it shall be subject to the covenants, stipulations, agreements and provisions of this Agreement which shall apply to, bind and be obligatory upon the Owner hereto, its successors and assigns, and shall bind all present and subsequent owners of the Property described herein.

Section 10

Severability Clause. The provisions of this Agreement shall be severable and if any phrase, clause, sentence or provision is declared unconstitutional, or the applicability thereof to the Owner, its successors and assigns, is held invalid, the remainder of this Covenant shall not be affected thereby.

Section 11

Utah Law and Venue. This Agreement shall be interpreted under the laws of the State of Utah. Any and all suits for any claims or for any and every breach or dispute arising out of this Agreement shall be maintained in the appropriate court of competent jurisdiction in Salt Lake County, Utah.

Section 12

Indemnification. This Agreement imposes no liability of any kind whatsoever on the City. The Owner hereby agrees to indemnify and hold the City and its officers, employees, agents and representatives from and against all actions, claims, lawsuits, proceedings, liability, damages, accidents, casualties, losses, claims, and expenses (including attorneys' fees and court costs) that directly result from the performance of this agreement, but only to the extent the same are caused by any negligent or wrongful act or omissions of the Owner, or the Owner's officers, employees, agents, and representatives.

Section 13

Amendments. This Agreement shall not be modified except by written instrument executed by the City and the Owner of the Property at the time of modification, and no modification shall be effective until recorded in the County Recorder's Office.

Section 14

Subordination Requirement. If there is a lien, trust deed or other property interest recorded against the Property, the trustee, lien holder, etc., shall be required to execute a subordination agreement or other acceptable recorded document agreeing to subordinate their interest to the Agreement.

Section 15

Exhibit B. Stormwater Maintenance and Preservation Plan (SWMP) must adapt to change in good judgment when site conditions and operations change and when existing programs are ineffective. Exhibit B shall be filed with this agreement at the County Recorder's Office.

STORMWATER POLLUTION PREVENTION MAINTENANCE AGREEMENT

SO AGREED this 1 day of June 2018.

PROPERTY OWNER

By: _____ Title: Manager

By: _____ Title: _____

STATE OF UTAH)
:ss.
COUNTY OF)

The above instrument was acknowledged before me by GARRETT DAW, this ~~June~~ FIRST day of JUNE, 2018.

Jacqueline Breslawski
Notary Public
Residing in: DRAPER, UT
My commission expires: 08/11/2018

JACQUELINE BRESLAWSKI
Notary Public
State of Utah
Comm. No. 678648
My Comm. Expires Aug 11, 2018

DRAPER CITY

By: _____ Date: 8.3.18
Mayor Troy K. Walker

Attest: _____
City Recorder

CITY OF DRAPER CORPORATE Seal 1978 State of Utah

STATE OF UTAH)
:ss.
COUNTY OF)

The above instrument was acknowledged before me by Troy Walker this 3 day of August, 2018.

Kellie Challburg
Notary Public
Residing in: Salt Lake County
My commission expires: Jan. 7, 2019

KELLIE CHALLBURG
Notary Public State of Utah
My Commission Expires on:
January 7, 2019
Comm. Number: 680202

Approved as to Form?

City Attorney

Attachments:

Exhibit A: Plat and Legal Description
Exhibit B: Stormwater Maintenance and Preservation Plan

Exhibit A

BEGINNING AT A POINT NORTH 19°33'26" WEST 368.97 FEET FROM THE SOUTHEAST CORNER OF SAID SECTION 30, TOWNSHIP 3 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN AND RUNNING; THENCE NORTH 87°58'00" WEST 585.79 FEET TO THE CALCUTATED EAST RIGHT-OF-WAY OF 600 EAST STREET; THENCE THE FOLLOWING THREE COURSES; 1) NORTH 05°32'33" EAST 34.24 FEET TO A POINT OF CURVATURE; 2) NORTHEASTERLY ALONG THE ARC OF A 500.00 FOOT RADIUS CURVE TO THE LEFT A DISTANCE OF 42.84 FEET (CHORD BEARS NORTH 03°05'17" EAST 42.83 FEET) TO A POINT OF TANGENCY; 3) NORTH 00°38'00" EAST 186.18 FEET TO THE SOUTHWEST CORNER OF LOT 2, HEUSER MINOR SUBDIVISION; THENCE SOUTH 87°34'16" EAST ALONG THE SOUTH BOUNDARY LINE OF SAID LOT 112.27 FEET; THENCE SOUTH 87°18'19" EAST 48.07 FEET; THENCE SOUTH 88°07'09" EAST 90.37 FEET TO THE NORTHEST CORNER OF A LESS AND EXPECTING PARCEL BOOK 8720 PAVE 5217; THENCE SOUTH 87°26'37" EAST LAONG SAID PARCEL AND A FENCE LINE 124.93 FEET TO THE SOUTHWEST CORNER OF LOT 2, FLOYD SWASEY SUBDIVISION; THENCE NORTH 01°15'09" WEST ALONG THE WEST LINE OF SAID LOT 171.52 FEET TO THE SOUTHWEST CORNER OF LOT 1 OF SAID SUBDIVSION; THENCE NORTH 00°01'21" WEST ALONG THE WEST BOUNDARY OF SAID LOT 32.40 FEET; THENCE NORTH 01°27'27" WEST ALONG THE WEST BOUNDAR OF SAID LOT 108.33 FEET TO THE NORTHWEST CORNER OF LOT 1; THENCE EAST ALONG THE NORTH BOUNDARY OF SAID LOT 126.86 FEET; THENCE NORTH 89°59'58" EAST 80.77 FEET; THENCE SOUTH 282.08 FEET; THENCE NORTH 89°12'00" EAST 169.65 FEET; THENCE SOUTH 75.20 FEET TO THE NORTH LINE OF AN ADJACENT DEED WITH A FENCE LINE CALL AND USING EVIDENCE OF A PAST FENCE; THENCE SOUTH 88°29'46" WEST ALONG EVIDENCE OF SAID FENCE 165.93 FEET; THENCE SOUTH 00°38'00" WEST 221.16 FEET TO THE POINT OF BEGINNING. CONTAINS 229,365 SQUARE FEET, 5.27 ACRES.

NEW LOT 1

BEGINNING AT A POINT WHICH SI THE SOUTHEAST CORNER OF LOT 1, FLOYD SWASEY SUBDIVSION SAID POINT ALSO BEING NORTH 00°06'19" WEST 784.04 FEET AND WEST 228.19 FEET FROM THE SOUTHEAST CORNER OF SECTION 30, TOWNSHIP 3 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN AND RUNNING; THENCE NORTH 88°07'59" WEST 123.00; THENCE NORTH 00°01'21" WEST 32.40 FEET; THE NCE NORTH 01°27'27" WEST 108.33 FEET; THENCE EAST 106.86 FEET; THENCE SOUTH 00°50'34" EAST 23.29; THENCE SOUTH 00°42'28" WEST TO THE POINT OF BEGINNING. CONTAINS 14,934 SQUARE FEET, 0.34 ACRES.

NEW LOT 2 (PER CLIENT EXHIBIT B)

BEGINNGIN AT A POINT WHICH IS THE SOUTHEAST CORNER OF LOT 1, FLOYD SWASEY SUBDIVISION SAID POINT ALSO BEING NORTH 00°06'19" WEST 784.04 FEET AND WEST 228.19 FEET FROM THE SOUTHEAST CORNER OF SECTION 30, TOWNSHIP 3 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN AND RUNNING; THENCE NORTH 00°42'28" EAST 120.78 FEET; THENCE NORTH 00°50'34" WEST 23.29 FEET TO THE NORTHEAST CORNER OF SAID LOT; THENCE NORTH 89°07'59" WEST TO THE POINT OF BEGINNING. CONTAINS 14,659 SQUARE FEET, 0.34 ACRES.

NEW LOT 3 (PER CLIENT EXHIBIT B)

BEGINNING AT A POINT WHICH IS NORTH 19°33'26" WEST 368.97 FEET FROM THE SOUTHEAST CORNER OF SECTION 30, TOWNSHIP 3 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN AND RUNNING; THENCE NORTH 87°58'00" WEST 146.29 FEET; THENCE NORTH 00°38'00" EAST 114.15 FEET; THENCE NORTH 45°00'00" EAST 44.93 FEET; THENCE NORTH 85°09'37" EAST 115.36 FEET; THENCE SOUTH 00°38'00" WEST 160.85 FEET TO THE POINT OF BEGINNING. CONTAINS 21,781 SQUARE FEET, 0.50 ACRES.

NEW LOTS 4-19 (PER CLIENT EXHIBIT B)

BEGINNING AT A POINT NORTH 19°33'26" WEST 368.97 FEET AND NORTH 87°58'00" WEST 146.29 FEET FROM THE SOUTHEAST CORNER OF SAID SECTION 30, TOWNSHIP 3 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN AND RUNNING; THENCE NORTH 87°58'00" WEST 439.50 FEET TO THE CALCULATED EAST RIGHT-OF-WAY OF 600 EAST STREET; THENCE THE FOLLOWOING THREE COURSES; 1) NORTH 05°32'33" EAST 34.24 FEET TO A POINT OF CURVATURE; 2) NORTHEASTERLY ALONG THE ARC OF A 500.00 FOOT RADIUS CURVE TO THE LEFT A DISTANCE OF 42.84 FEET (CHORD BEARS NORTH 03°05,17" EAST 42.83 FEET) TO A POINT OF TAGENCY; 3) NORTH 00°38'00" EAST 186.18 FEET TO THE SOUTHWEST CORNER OF LOT 2, HEUSER MINOR SUBDIVISION; THENCE SOUTH 87°34'16" EAST ALONG THE SOUTH BOUNDARY LINE OF SAID LOT 112.27 FEET; THENCE SOUTH 87°18'19" EAST 48.07 FEET; THENCE SOUTH 88°07'09" EAST 90.37 FEET TO THE NORTHWEST CORNER OF A LESS AND EXCEPTING PARCEL BOOK 8720 PAGE 5217; THENCE SOUTH 87°26'37" EAST ALONG SAID PARCEL AND A FENCE LINE OF SAID LOT 171.52 FEET TO THE SOUTHWEST CORNER OF LOT 1 OF SAID SUBDIVISION; THENCE SOUTH 88°07'59" EAST 123.00 FEET; THENCE EAST 81.93 FEET; THENCE SOUTH 137.37 FEET; THENCE NORTH 89°12'00: EAST 169.65 FEET; THENCE SOUTH 75.20 FEET TO THE NORTH LINE OF AN ADJACENT DEED WITH A FENCE LINE CALL AND USING EVIDENCE OF A PAST FENCE; THENCE SOUTH 88°29.46" WEST ALONG EVIDENCE OF SAID FENCE 165.93 FEET; THENCE SOUTH 00°38.00" WEST 60.32 FEET; THENCE SOUTH 85°09'37" WEST 115.36 FEET; TEHNCE SOUTH 45°00'00" WEST 44.93 FEET; THENCE SOUTH 00°38'00" WEST 114.15 TO THE POINT OF BEGINNING. CONTAINS 178,069 SQUARE FEET 4.09 ACRES.

Lots 4-19 of the Proposed Plat of 6TH STREET COTTAGES:

Beginning at a point North 19°33'26" West 368.97 feet and North 87°58'00" West 146.29 feet from the Southeast corner of Section 30, Township 3 South, Range 1 East, Salt Lake Base and Meridian and running thence North 87°58'00" West 439.50 feet to the calculated East Right-of-Way of 600 East Street; thence the following three courses; 1) North 05°32'33" East 34.24 feet to a point of curvature; 2) Northeasterly along the arc of a 500.00 foot radius curve to the left a distance of 42.84 feet (chord bears North 03°05'17" East 42.83 feet) to a point of tangency; 3) North 00°38'00" East 186.18 feet to the Southwest corner of Lot 2, Heuser Minor Subdivision; thence South 87°34'16" East along the South boundary line of said Lot 112.27 feet; thence South 87°18'19" East 48.07 feet; thence South 88°07'09" East 90.37 feet to the Northwest corner of a less and excepting Parcel Book 8720, Page 5217; thence South 87°26'37" East along said Parcel and a fence line 124.93 feet to the Southwest corner of Lot 2, Floyd Swasey Subdivision; thence North 01°15'09" West along the West line of said Lot 171.52 feet to the Southwest corner Lot 1 of said subdivision; thence South 88°07'59" East 123.00 feet; thence East 81.93 feet; thence South 137.37 feet; thence North 89°12'00" East 169.65 feet; thence South 75.20 feet to the North line of an adjacent deed with a fence line call and using evidence of a past fence; thence South 88°29'46" West along evidence of said fence 165.93 feet; thence South 00°38'00" West 60.32 feet; thence South 85°09'37" West 115.36 feet; thence South 45°00'00" West 44.93 feet; thence South 00°38'00" West 114.15 feet to the point of beginning.

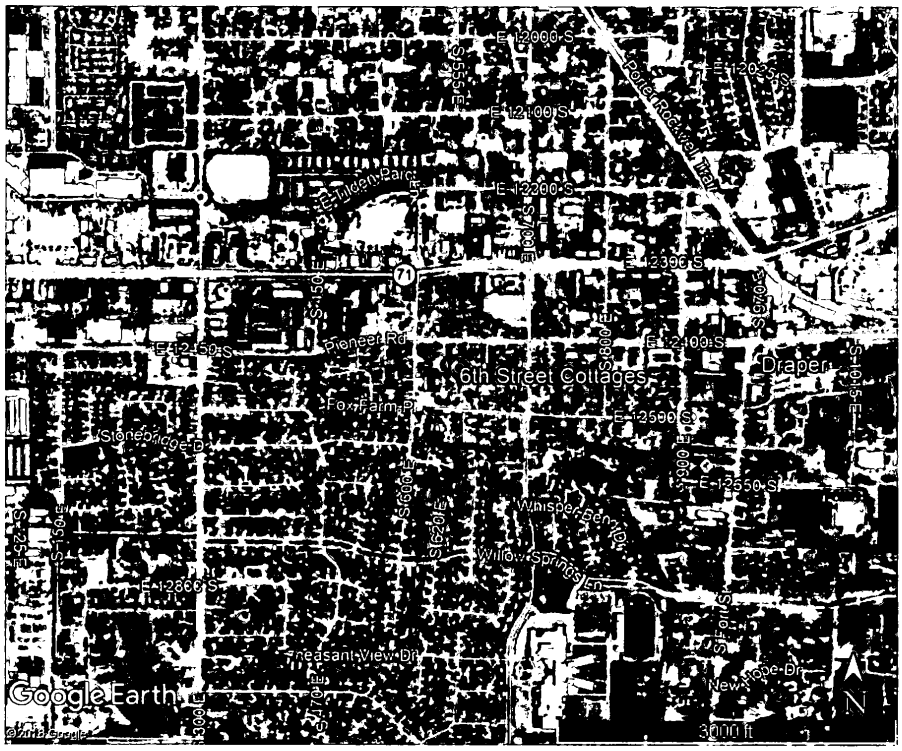

6th Street Cottages
Draper
E 12000 S
E 12100 S
E 12200 S
E 12300 S
E 12400 S
E 12500 S
E 12600 S
E 12650 S
E 12800 S
Pioneer Rd
Fox Farm Pl
Pheasant View Dr
Willow Springs Ln
Whispering Pine Dr
Stonepine Dr
New Hope Dr
Google Earth
3000 ft
N

Exhibit B

Introduction

This Long Term Stormwater Management Plan (LTSMP) is being implemented in order to protect water quality. Post construction Stormwater controls are required to be installed and maintained under the Utah Pollution Discharge Elimination System and the Clean Water Act to keep water clean. Installing post construction controls will prevent the discharge of pollutants into the local streams, rivers, and lakes. In recent years, contaminated Stormwater from various construction sites and commercial facilities has been polluting water bodies throughout the state of Utah. By properly installing and maintaining post construction Stormwater controls pollutants will be contained and water quality will be improved.

This management plan is designed to prevent pollutants from entering the storm drain system and polluting our waters. This facility is responsible for ensuring that any water discharged from the facility is free of harmful pollutants, thereby assisting in the health and protection of waters in our community. This plan will address Stormwater controls at this facility. These controls will be monitored, maintained, and improved if needed to prevent pollutants from being discharged from this facility into the storm drain system or local waters. Additionally, the patrons or employees of this facility will be trained or made aware of the aforementioned issues and controls.

General Site Use and Description

The 6th Street Cottages is a single-family residential housing development consisting of 16 lots, landscaped common areas and pergola.

This facility is used for single-family housing including tenant leisure.

TRAINING

Ensure that all employees and maintenance contractors know and understand the SOPs specifically written to manage the property. Report any variances to the LTSMP contact listed on the Facility Map. File all training records in Exhibit C.

RECORDKEEPING

Maintain records of operation activities in accordance with SOPs.
Mail a copy of the record to the city stormwater division annually.

SOPs: Facility Long Term Stormwater BMPs Information

SOPs for the Long Term BMPs referenced on the map can be downloaded and viewed from the following site:

https://goo.gl/WXRWM2

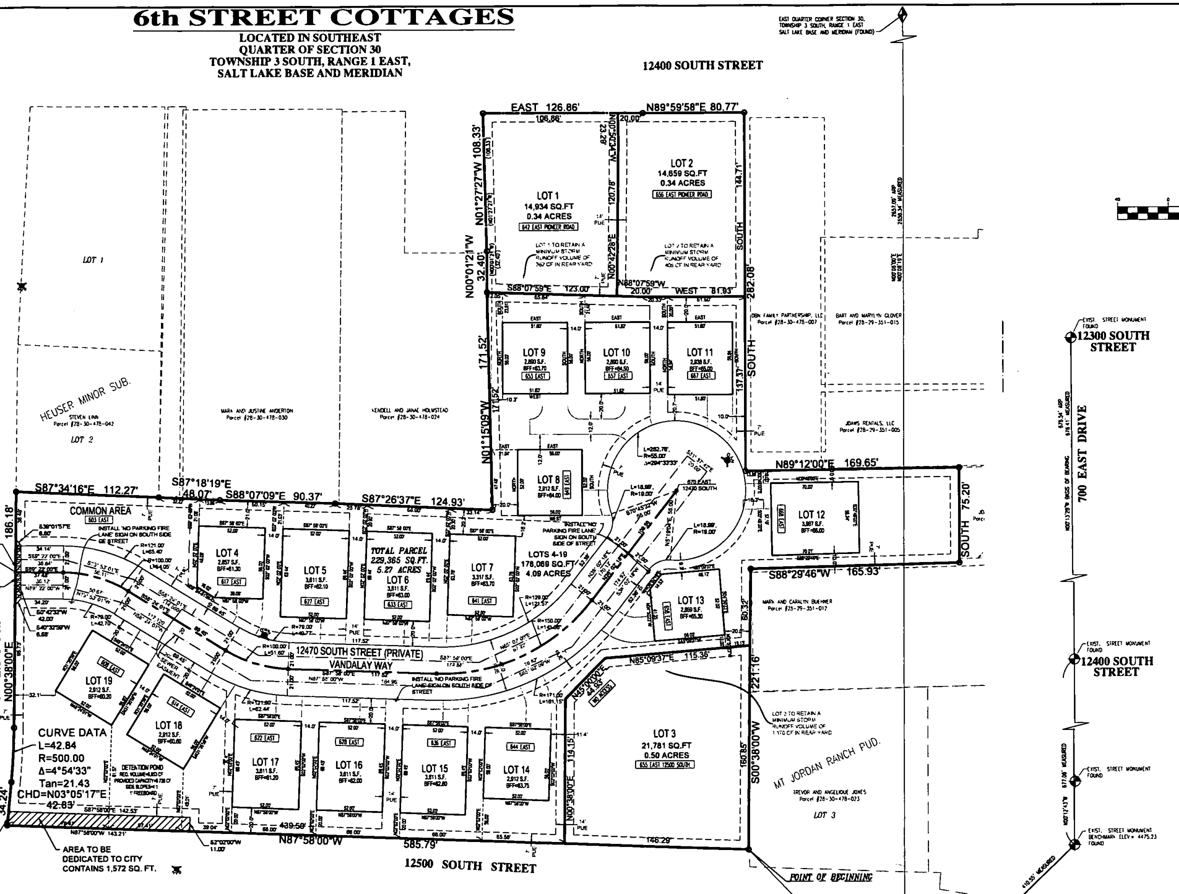
Not all SOPs found at the link above will apply to this facility. See map for BMPs used at this location.

Facility Maps

Include the overview of the facility with the location of all Long Term Stormwater BMPs

6th STREET COTTAGES

LOCATED IN SOUTHEAST QUARTER OF SECTION 30 TOWNSHIP 3 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN



GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft.

LEGEND

- SECTION CORNER
- FIRE HYDRANT
- STREET MONUMENT FOUND
- SET REBAR AND CAP
- BOUNDARY LINE
- DEED AND ADJACENT SUBDIVISIONS

NOTES

1. BASEMENT ELEVATION SHALL BE A MINIMUM OF THREE FEET ABOVE HIGHEST GROUNDWATER ELEVATION.
2. LOTS 4-19 ARE TO HAVE ROOF DRAINS DRAINING INTO THE PRIVATE STORM DRAIN SYSTEM.
3. PRIVATE STREETS ARE ALSO TO SERVE AS PUBLIC UTILITY EASEMENTS.

DEVELOPED BY
JEFF MANSELL
BOARDWALK INDUSTRIES
12660 SOUTH FORT STREET 102
DRAPER, UTAH 84020
PHONE No. 801-550-2885
jeffdmansell@gmail.com

SURVEYOR'S CERTIFICATE

I, C. DAVID McKINNEY DO HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR, AND THAT I HOLD CERTIFICATE NO. 5251295 AS PRESCRIBED UNDER THE LAWS OF THE STATE OF UTAH. I FURTHER CERTIFY BY AUTHORITY OF THE OWNERS, I HAVE MADE A SURVEY OF SAID TRACT OF LAND SHOWN ON THIS PLAT AND DESCRIBED BELOW, AND HAVE SUBDIVIDED SAID TRACT OF LAND INTO LOTS, AND EASEMENTS TO BE KNOWN AS 6th STREET COTTAGES AND THAT THE SAME HAS BEEN CORRECTLY SURVEYED AND STAKED ON THE GROUND AS SHOWN ON THIS PLAT AND THAT THIS IS TRUE AND CORRECT.

C. DAVID McKINNEY
LIC. 5251295

DATE

PROFESSIONAL LAND SURVEYOR C. DAVID McKINNEY No. 5251295 11/16/17 STATE OF UTAH

BOUNDARY DESCRIPTION

BEGINNING AT A POINT NORTH 19°33'26" WEST 368.97 FEET FROM THE SOUTHEAST CORNER OF SAID SECTION 30, TOWNSHIP 3 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN AND RUNNING; THENCE NORTH 87°58'00" WEST 585.79 FEET TO THE CALCULATED EAST RIGHT-OF-WAY OF 600 EAST STREET; THENCE THE FOLLOWING THREE COURSES; 1) NORTH 05°32'33" EAST 34.24 FEET TO A POINT OF CURVATURE; 2) NORTHEASTERLY ALONG THE ARC OF A 500.00 FOOT RADIUS CURVE TO THE LEFT A DISTANCE OF 42.84 FEET (CHORD BEARS NORTH 03°05'17" EAST 42.83 FEET) TO A POINT OF TANGENCY; 3) NORTH 00°38'00" EAST 186.18 FEET TO THE SOUTHWEST CORNER OF LOT 2, HEUSER MINOR SUBDIVISION; THENCE SOUTH 87°34'16" EAST ALONG THE SOUTH BOUNDARY LINE OF SAID LOT 112.27 FEET; THENCE SOUTH 87°18'19" EAST 48.07 FEET; THENCE SOUTH 88°07'09" EAST 90.37 FEET TO THE NORTHWEST CORNER OF A LESS AND EXCEPTING PARCEL BOOK 8720 PAGE 5217; THENCE SOUTH 87°26'37" EAST ALONG SAID PARCEL AND A FENCE LINE 124.93 FEET TO THE SOUTHWEST CORNER OF LOT 2, FLOYD SWASEY SUBDIVISION; THENCE NORTH 01°15'09" WEST ALONG THE WEST LINE OF SAID LOT 171.52 FEET TO THE SOUTHWEST CORNER OF LOT 1 OF SAID SUBDIVISION; THENCE NORTH 00°01'21" WEST ALONG THE WEST BOUNDARY OF SAID LOT 32.40 FEET; THENCE NORTH 01°27'27" WEST ALONG THE WEST BOUNDARY OF SAID LOT 108.33 FEET TO THE NORTHWEST CORNER OF LOT 1; THENCE EAST ALONG THE NORTH BOUNDARY OF SAID LOT 126.86 FEET; THENCE NORTH 89°59'58" EAST 80.77 FEET; THENCE SOUTH 282.08 FEET; THENCE NORTH 89°12'00" EAST 169.65 FEET; THENCE SOUTH 75.20 FEET TO THE NORTH LINE OF AN ADJACENT DEED WITH A FENCE LINE CALL AND USING EVIDENCE OF A PAST FENCE; THENCE SOUTH 88°29'46" WEST ALONG EVIDENCE OF SAID FENCE 165.93 FEET; THENCE SOUTH 00°38'00" WEST 221.16 FEET TO THE POINT OF BEGINNING. CONTAINS 229,365 SQUARE FEET, 5.27 ACRES

NEW LOT 1

BEGINNING AT A POINT WHICH IS THE SOUTHEAST CORNER OF LOT 1, FLOYD SWASEY SUBDIVISION SAID POINT ALSO BEING NORTH 00°06'19" WEST 784.04 FEET AND WEST 228.19 FEET FROM THE SOUTHEAST CORNER OF SECTION 30, TOWNSHIP 3 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN AND RUNNING; THENCE NORTH 88°07'59" WEST 123.00; THENCE NORTH 00°01'21" WEST 32.40 FEET; THE NCE NORTH 01°27'27" WEST 108.33 FEET; THENCE EAST 106.86 FEET; THENCE SOUTH 00°50'34 EAST 23.29; THENCE SOUTH 00°42'28" WEST TO THE POINT OF BEGINNING. CONTAINS 14,934 SQUARE FEET, 0.34 ACRES

NEW LOT 2 (PER CLIENT EXHIBIT B)

BEGINNING AT A POINT WHICH IS THE SOUTHEAST CORNER OF LOT 1, FLOYD SWASEY SUBDIVISION SAID POINT ALSO BEING NORTH 00°06'19" WEST 784.04 FEET AND WEST 228.19 FEET FROM THE SOUTHEAST CORNER OF SECTION 30, TOWNSHIP 3 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN AND RUNNING; THENCE NORTH 00°47'28" EAST 120.78 FEET; THENCE NORTH 00°50'34" WEST 23.29 FEET TO THE NORTHEAST CORNER OF SAID LOT; THENCE NORTH 89°59'58" EAST 80.77 FEET; THENCE SOUTH 144.71 FEET; THENCE WEST 81.93 FEET; THENCE NORTH 88°07'59" WEST TO THE POINT OF BEGINNING. CONTAINS 14,659 SQUARE FEET, 0.34 ACRES

NEW LOT 3 (PER CLIENT EXHIBIT B)

BEGINNING AT A POINT WHICH IS NORTH 19°33'26" WEST 368.97 FEET FROM THE SOUTHEAST CORNER OF SECTION 30, TOWNSHIP 3 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN AND RUNNING; THENCE NORTH 87°58'00" WEST 148.29 FEET; THENCE NORTH 00°38'00" EAST 114.15 FEET; THENCE NORTH 45°00'00" EAST 44.93 FEET; THENCE NORTH 85°09'37" EAST 115.36 FEET; THENCE SOUTH 00°38'00" WEST 160.85 FEET TO THE POINT OF BEGINNING. CONTAINS 21,781 SQUARE FEET, 0.50 ACRES

NEW LOTS 4-19 (PER CLIENT EXHIBIT B)

BEGINNING AT A POINT NORTH 19°33'26" WEST 368.97 FEET AND NORTH 87°58'00" WEST 148.29 FEET FROM THE SOUTHEAST CORNER OF SAID SECTION 30, TOWNSHIP 3 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN AND RUNNING; THENCE NORTH 87°58'00" WEST 439.50 FEET TO THE CALCULATED EAST RIGHT-OF-WAY OF 600 EAST STREET; THENCE THE FOLLOWING THREE COURSES; 1) NORTH 05°32'33" EAST 34.24 FEET TO A POINT OF CURVATURE; 2) NORTHEASTERLY ALONG THE ARC OF A 500.00 FOOT RADIUS CURVE TO THE LEFT A DISTANCE OF 42.84 FEET (CHORD BEARS NORTH 03°05'17" EAST 42.83 FEET) TO A POINT OF TANGENCY; 3) NORTH 00°38'00" EAST 186.18 FEET TO THE SOUTHWEST CORNER OF LOT 2, HEUSER MINOR SUBDIVISION; THENCE SOUTH 87°34'16" EAST ALONG THE SOUTH BOUNDARY LINE OF SAID LOT 112.27 FEET, THENCE SOUTH 87°18'19" EAST 48.07 FEET; THENCE SOUTH 88°07'09" EAST 90.37 FEET TO THE NORTHWEST CORNER OF A LESS AND EXCEPTING PARCEL BOOK 8720 PAGE 5217; THENCE SOUTH 87°26'37" EAST ALONG SAID PARCEL AND A FENCE LINE 124.93 FEET TO THE SOUTHWEST CORNER OF LOT 2, FLOYD SWASEY SUBDIVISION; THENCE NORTH 01°15'09" WEST ALONG THE WEST LINE OF SAID LOT 171.52 FEET TO THE SOUTHWEST CORNER OF LOT 1 OF SAID SUBDIVISION; THENCE SOUTH 88°07'59" EAST 123.00 FEET; THENCE EAST 81.93 FEET; THENCE SOUTH 137.37 FEET; THENCE NORTH 89°12'00" EAST 169.65 FEET; THENCE SOUTH 75.20 FEET TO THE NORTH LINE OF AN ADJACENT DEED WITH A FENCE LINE CALL AND USING EVIDENCE OF A PAST FENCE; THENCE SOUTH 88°29'46" WEST ALONG EVIDENCE OF SAID FENCE 165.93 FEET; THENCE SOUTH 00°38'00" WEST 60.32 FEET; THENCE SOUTH 85°09'37" WEST 115.36 FEET; THENCE SOUTH 45°00'00" WEST 44.93 FEET; THENCE SOUTH 00°38'00" WEST 114.15 TO THE POINT OF BEGINNING. CONTAINS 178,069 SQUARE FEET 4.09 ACRES

OWNER'S DEDICATION

Known all men by these presents that I/we, the undersigned owner(s) of the hereon described tract of land, hereby set apart and subdivide the same into lots and streets as shown on this plat and name said plat 6th Street Cottages, and do hereby dedicate, grant and convey to Draper City, Utah: (1) all those parts or portions of said tract of land designated as streets, the same to be used as public thoroughfares forever; (2) those certain public utility and drainage easements as shown hereon, the same to be used for the installation, maintenance, and operation of public utility service lines and drainage; and (3) those parcels designated as public open space, parks, trail or easements, or of similar designation. In witness whereof, we have hereunto set our hands this day__ of__________ 20__.

6th STREET COTTAGES

do hereby dedicate for perpetual use of the public all public utility and drainage easements shown on this plat as labeled In witness whereof _____ have hereunto set __________ this __________ day of __________ A.D., 20______.

ACKNOWLEDGMENT

STATE OF UTAH
COUNTY OF SALT LAKE } S.S.

On the _______ day of ___________ A.D., 20______ personally appeared before me, the undersigned Notary Public, in and for said County of Salt Lake in said State of Utah, the signer ( ) of the above Owner's dedication __________ in number, who duly acknowledged to me that _________________ signed it freely and voluntarily and for the uses and purposes therein mentioned. MY COMMISSION EXPIRES: _______

NOTARY PUBLIC
RESIDING IN SALT LAKE COUNTY

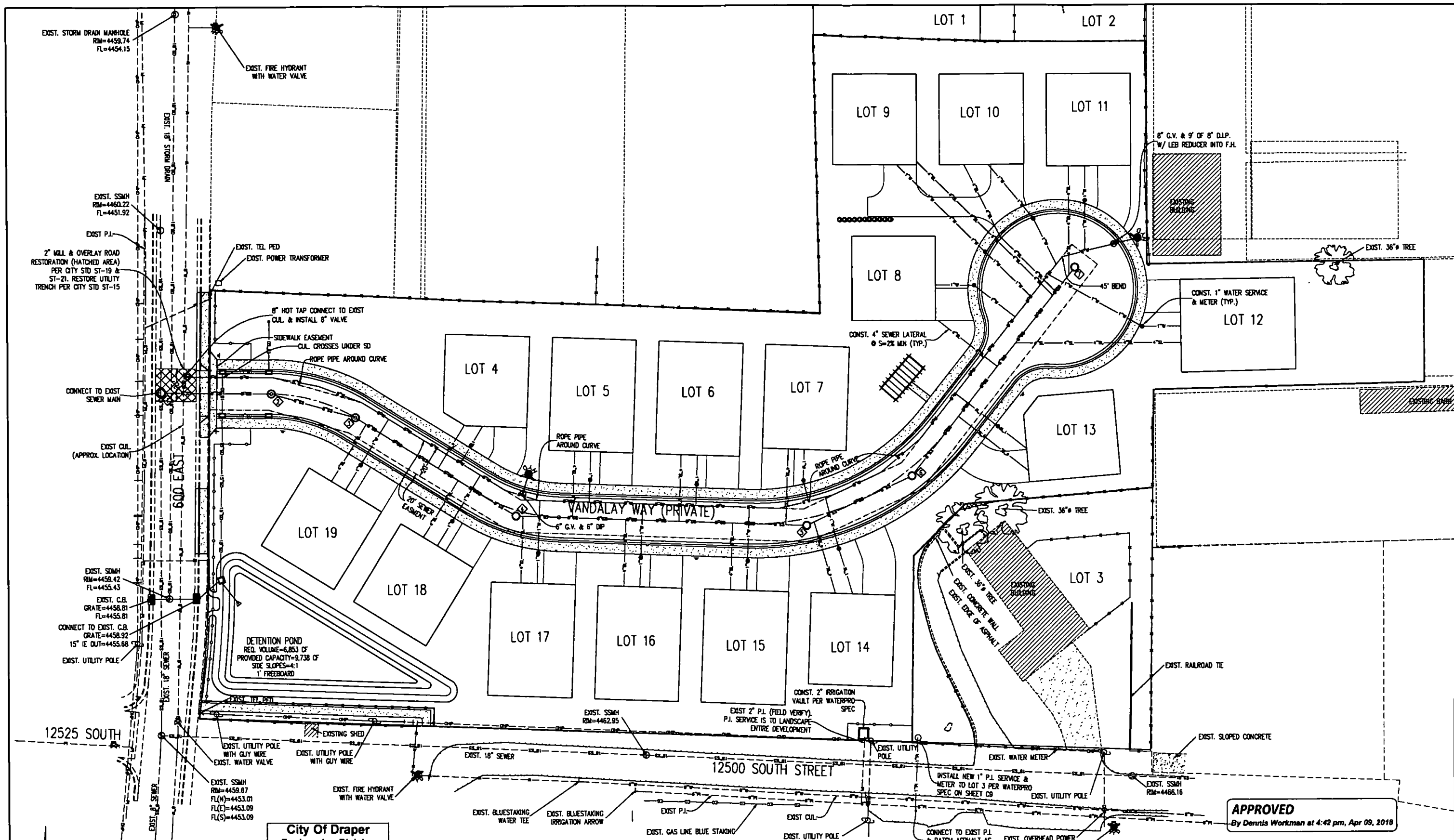
6th STREET COTTAGES

LOCATED IN SOUTHEAST QUARTER OF SECTION 30 TOWNSHIP 3 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN

CENTURYLINK	SALT LAKE VALLEY HEALTH DEPARTMENT	COMCAST	ROCKY MOUNTAIN POWER	QUESTAR GAS COMPANY
APPROVED THIS _____ DAY OF _____ A.D., 20___	APPROVED THIS _____ DAY OF _____ A.D., 20___ BY	APPROVED THIS _____ DAY OF _____ A.D., 20___	APPROVED THIS _____ DAY OF _____ A.D., 20___ BY THE UTAH POWER.	APPROVED THIS _____ DAY OF _____ A.D., 20___ BY QUESTAR GAS COMPANY.
REPRESENTATIVE CENTURYLINK	SALT LAKE VALLEY HEALTH DEPARTMENT	REPRESENTATIVE COMCAST	REPRESENTATIVE ROCK MOUNTAIN POWER	REPRESENTATIVE OF QUESTAR GAS COMPANY

SOUTH VALLEY SEWER DISTRICT	PLANNING COMMISSION	DRAPER CITY ENGINEER	CITY ATTORNEY	WATERPRO	CITY APPROVAL
APPROVED THIS _____ DAY OF _____ A.D., 20___	APPROVED THIS _____ DAY OF _____ A.D., 20___ BY THE DRAPER CITY ZONING ADMINISTRATOR.	APPROVED THIS _____ DAY OF _____ A.D., 20___	APPROVED AS TO FORM THIS _____ DAY OF _____ A.D., 20___	APPROVED THIS _____ DAY OF _____ A.D., 20___	PRESENTED TO THE CITY COUNCIL APPROVED THIS ____ DAY OF _____ A.D., 20___ AT WHICH TIME THIS SUBDIVISION WAS APPROVED AND ACCEPTED.
SOUTH VALLEY SEWER DISTRICT	CHAIRMAN - DRAPER CITY PLANNING COMMISSION	DRAPER CITY ENGINEER	DRAPER CITY ATTORNEY	REPRESENTATIVE WATERPRO	ATTEST: CITY RECORDER / CITY MANAGER

RECORDED #
STATE OF UTAH, COUNTY OF SALT LAKE, RECORDED AND FILED AT THE REQUEST OF _______
DATE _____ TIME _____ BOOK _____ PAGE _____
FEE $ _____ CLERK _____ SALT LAKE COUNTY RECORDER



City Of Draper
Engineering Division
04/09/2018 5:58:16 PM
CONSTRUCTION DRAWINGS
APPROVED: Eric Lundell

FIRE DEPARTMENT NOTES:

FIRE DEPARTMENT ACCESS IS REQUIRED. AN UNOBSTRUCTED MINIMUM ROAD WIDTH OF TWENTY-SIX (26) FEET EXCLUSIVE OF THE SHOULDERS AND A MINIMUM HEIGHT OF THIRTEEN (13) FEET SIX (6) INCHES SHALL BE REQUIRED. THE ROAD MUST BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF EMERGENCY APPARATUS. THE SURFACE SHALL BE ABLE TO PROVIDE ALL WEATHER DRIVING CAPABILITIES. THE ROAD SHALL HAVE AN INSIDE TURNING RADIUS OF TWENTY-EIGHT (28) FEET. THERE SHALL BE A MAXIMUM GRADE OF 10%.

DEAD END ROADS. DEAD ENDS REQUIRE AN APPROVED TURN-AROUND. CURRENT CODES REQUIRE A 96' CUL-DE-SAC. THIS MAY BE ENFORCED BY DRAPER CITY.

FIRE HYDRANTS ARE REQUIRED. THERE SHALL BE A MINIMUM OF 2 HYDRANTS INSTALLED, SPACED AT 250FT. INCREMENTS. THE REQUIRED FIRE FLOW FOR THIS PROJECT IS 1,750 GPM FOR FULL 2 HOUR DURATION. THIS WILL ALLOW UP TO A 4,800 SQFT HOME. ANYTHING LARGER WILL REQUIRE ADDITIONAL FIRE FLOW TEST TO DETERMINE IF SPRINKLERS ARE NEEDED.

FIRE HYDRANTS ARE REQUIRED. HYDRANT QUANTITY AND FIRE FLOW IS BASED UPON BUILDING SIZE AND CONSTRUCTION TYPE. MULTIPLE HYDRANTS AND HIGHER FLOWS WILL BE NEEDED IF THE SQUARE FOOTAGE IS DETERMINED GREATER.

HYDRANTS AND SITE ACCESS. ALL HYDRANTS AND FIRE DEPARTMENT ACCESS TO THE SITE SHALL BE INSTALLED AND APPROVED BY THE FIRE DEPARTMENT PRIOR TO THE ISSUANCE OF ANY BUILDING PERMITS.

NO COMBUSTIBLE CONSTRUCTION. CONSTRUCTION SHALL NOT BE ALLOWED PRIOR TO HYDRANT INSTALLATION AND TESTING BY WATER PURVEYOR. ALL HYDRANTS MUST BE OPERATIONAL PRIOR TO ANY COMBUSTIBLE ELEMENTS BEING RECEIVED OR DELIVERED ON BUILDING SITE.

VISIBLE ADDRESSING REQUIRED. NEW AND EXISTING BUILDINGS SHALL HAVE APPROVED ADDRESS NUMBERS PLAINLY LEGIBLE AND VISIBLE FROM THE STREET FRONTING THE PROPERTY. THESE NUMBERS SHALL CONTRAST WITH THEIR BACKGROUND.

THIS PROJECT WILL FALL UNDER DRAPER GATE ORDINANCE. IF THERE IS A GATED ENTRANCE TO THE FIRE DEPARTMENT ACCESS ROAD, IT MUST MEET THE FIRE CODE ACCESS REQUIREMENTS. GATES MUST BE A MINIMUM WIDTH OF TWENTY (20) FEET WIDE FOR SINGLE OPENINGS OR TWELVE (12) FEET WIDE ON EACH SIDE WHERE THERE ARE 2 OPENINGS. A FIRE DEPARTMENT EMERGENCY ACCESS DEVICE IS REQUIRED FOR EMERGENCY VEHICLES AND MUST MEET THE CITY ORDINANCE FOR GATES TO BE APPROVED BY THE FIRE DEPARTMENT AND POLICE DEPARTMENT.

STREET SIGNS ARE REQUIRED. SIGNS ARE TO BE POSTED AND LEGIBLE PRIOR TO BUILDING PERMITS BEING ISSUED. ALL LOTS ARE TO HAVE LOT NUMBERS OR ADDRESS POSTED.

UTILITY LEGEND

- SEWER MANHOLE LABEL (SEE PP1)
- STORM DRAIN BOX LABEL (SEE C3)
- FIRE HYDRANT
- CULINARY WATER VALVE
- STREET SIGN
- STOP SIGN/ 'NO PARKING' SIGN
- STREET LIGHT
- POWER POLE
- TELEPHONE BOX
- CULINARY WATER
- SEWER PIPE
- STORM DRAIN PIPE
- EDGE OF ASPHALT
- EXIST FENCE
- OVERHEAD POWER LINE
- BURIED POWER LINE
- TELEVISION LINE
- TELEPHONE LINE
- GAS LINE

CULINARY WATER CONSTRUCTION NOTES:

1. ALL CULINARY WATER & IRRIGATION WATER CONSTRUCTION SHALL CONFORM TO WATERPRO STANDARDS & SPECIFICATIONS
2. ENSURE THAT THRUST BLOCKS OR APPROPRIATE RESTRAINT LENGTHS ARE INSTALLED AT PROPER LOCATIONS PER WATERPRO SPEC.
3. ENSURE THAT ALL VALVES ARE FLANGED TO TEES.
4. VERIFY THAT SANITARY SEWER TO WATER LINE SPACING IS MIN. 10' FROM EDGE OF PIPE TO EDGE OF PIPE.
5. DECISION TO LOOP OR ROPE MAIN TO AVOID CONFLICT LEFT TO WATERPRO INSPECTOR DECISION.

FIRE FLOW NOTE:

1. MINIMUM FIRE FLOW REQUIRED IS 1750 GPM FOR A FULL 2 HOUR DURATION. THIS WILL ALLOW UP TO A 4800 SF HOME.

PUBLIC UTILITY EASEMENT NOTE:

ALL AREA OUTSIDE OF THE LOT AREAS IS A PUBLIC UTILITY EASEMENT.

STORM DRAIN NOTES:

1. ALL SUBSURFACE DRAINS OR LAND DRAINS REQUIRE A PRIVATE MAINTENANCE PLAN AND PROTECTIVE COVENANTS PER DCMC 17-3-030(K) AND 17-3-030(N).
2. ALL ROOF DRAINS SHALL DISCHARGE ONTO SITE AND INTO PRIVATE STORM DRAIN SYSTEM.

EXCAVATION NOTES:

1. ANY EXCAVATION IN THE PUBLIC RIGHT OF WAY REQUIRES AN EXCAVATION PERMIT FROM THE CITY ENGINEER'S OFFICE AND SHALL BE IN ACCORDANCE WITH DRAPER CITY STANDARDS.

SOUTH VALLEY SEWER DISTRICT NOTES:

1. ALL SANITARY SEWER CONSTRUCTION SHALL COMPLY WITH SOUTH VALLEY SEWER DISTRICT'S DESIGN STANDARDS AND CONSTRUCTION SPECIFICATIONS.
2. CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND INVERT ELEVATIONS OF EXISTING MANHOLES AND OTHER UTILITIES BEFORE STAKING OR CONSTRUCTING ANY NEW SEWER LINES.
3. FOUR FEET OF COVER WILL BE REQUIRED OVER ALL SEWER LINES.

811 Know what's below. Call before you dig.

Scale 1" = 30'

REVISIONS

Rev.	Date	Description
1	05/15/17	REVISED PER CITY & WATERPRO COMMENTS
2	06/07/17	REVISED PER CITY COMMENTS
3	03/02/18	REVISED PER CITY COMMENTS

Developer/Property Owner: Jeff Mansell
Phone: 801-550-2885

EXCEL ENGINEERING
David W. Peterson, P.E., License #270393
12 West 100 North, Suite 201, American Fork, UT 84003
P: (801) 756-4504; david@excelcivil.com

REGISTERED PROFESSIONAL ENGINEER No. 270393 DAVID W PETERSON STATE OF UTAH

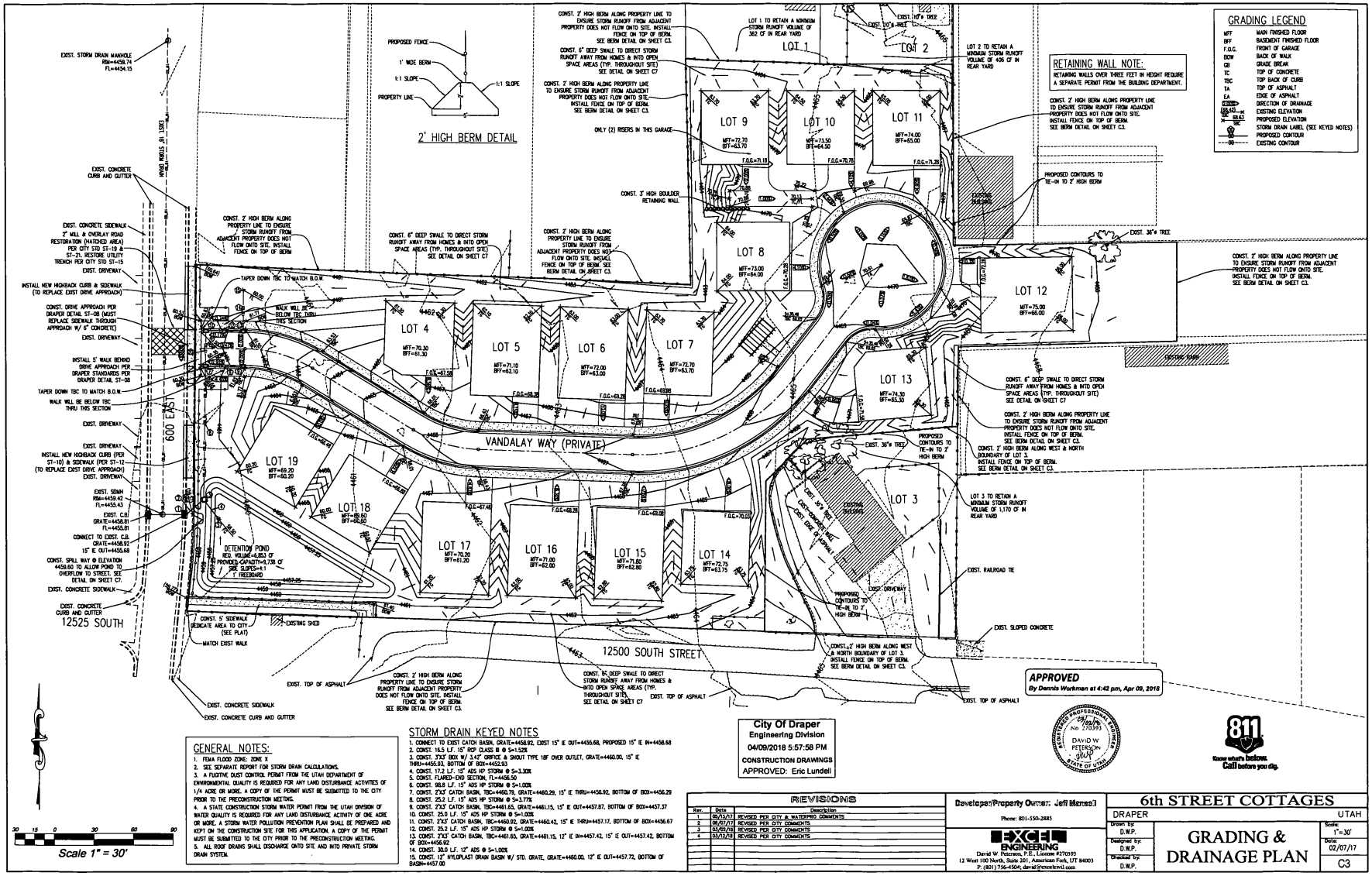
6th STREET COTTAGES

DRAPER UTAH

Drawn by: D.W.P.
Designed by: D.W.P.
Checked by: D.W.P.

UTILITY PLAN

Scale: 1"=30'
Date: 02/07/17
C4



GENERAL NOTES:

1. FEMA FLOOD ZONE: ZONE X
2. SEE SEPARATE REPORT FOR STORM DRAIN CALCULATIONS.
3. A FUGITIVE DUST CONTROL PERMIT FROM THE UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY IS REQUIRED FOR ANY LAND DISTURBANCE ACTIVITIES OF 1/4 ACRE OR MORE. A COPY OF THE PERMIT MUST BE SUBMITTED TO THE CITY PRIOR TO THE PRECONSTRUCTION MEETING.
4. A STATE CONSTRUCTION STORM WATER PERMIT FROM THE UTAH DIVISION OF WATER QUALITY IS REQUIRED FOR ANY LAND DISTURBANCE ACTIVITY OF ONE ACRE OR MORE. A STORM WATER POLLUTION PREVENTION PLAN SHALL BE PREPARED AND KEPT ON THE CONSTRUCTION SITE FOR THIS APPLICATION. A COPY OF THE PERMIT MUST BE SUBMITTED TO THE CITY PRIOR TO THE PRECONSTRUCTION MEETING.
5. ALL ROOF DRAINS SHALL DISCHARGE ONTO SITE AND INTO PRIVATE STORM DRAIN SYSTEM.

Scale 1" = 30'

STORM DRAIN KEYED NOTES

1. CONNECT TO EXIST CATCH BASIN, GRATE=4458.92, EXIST 15" IE OUT=4455.68, PROPOSED 15" IE IN=4458.68
2. CONST. 16.5 L.F. 15" RCP CLASS III @ S=1.52%
3. CONST. 3'x2' BOX W/ 3.42" ORIFICE & SNOUT TYPE 18F OVER OUTLET, GRATE=4460.00, 15" IE THRU=4455.93, BOTTOM OF BOX=4452.93
4. CONST. 17.2 L.F. 15" ADS HP STORM @ S=3.30%
5. CONST. FLARED-END SECTION, FL=4456.50
6. CONST. 98.8 L.F. 15" ADS HP STORM @ S=1.00%
7. CONST. 2'x3' CATCH BASIN, TBC=4460.79, GRATE=4460.29, 15" IE THRU=4456.92, BOTTOM OF BOX=4456.29
8. CONST. 25.2 L.F. 15" ADS HP STORM @ S=3.77%
9. CONST. 2'x3' CATCH BASIN, TBC=4461.65, GRATE=4461.15, 15" IE OUT=4457.87, BOTTOM OF BOX=4457.37
10. CONST. 25.0 L.F. 15" ADS HP STORM @ S=1.00%
11. CONST. 2'x3' CATCH BASIN, TBC=4460.92, GRATE=4460.42, 15" IE THRU=4457.17, BOTTOM OF BOX=4456.67
12. CONST. 25.2 L.F. 15" ADS HP STORM @ S=1.00%
13. CONST. 2'x3' CATCH BASIN, TBC=4461.65, GRATE=4461.15, 12" IE IN=4457.42, 15" IE OUT=4457.42, BOTTOM OF BOX=4456.92
14. CONST. 30.0 L.F. 12" ADS @ S=1.00%
15. CONST. 12" NYLOPLAST DRAIN BASIN W/ STD. GRATE, GRATE=4460.00, 12" IE OUT=4457.72, BOTTOM OF BASIN=4457.00

City Of Draper
Engineering Division
04/09/2018 5:57:58 PM
CONSTRUCTION DRAWINGS
APPROVED: Eric Lundell

REVISIONS		
Rev.	Date	Description
1	05/15/17	REVISED PER CITY & WATERPRO COMMENTS
2	06/07/17	REVISED PER CITY COMMENTS
3	03/02/18	REVISED PER CITY COMMENTS
4	03/12/18	REVISED PER CITY COMMENTS

Developer/Property Owner: Jeff Mensel
Phone: 801-550-2885

EXCEL ENGINEERING
David W Peterson, P.E., License #270393
12 West 100 North, Suite 201, American Fork, UT 84003
P: (801) 756-4504; david@excelcivil.com

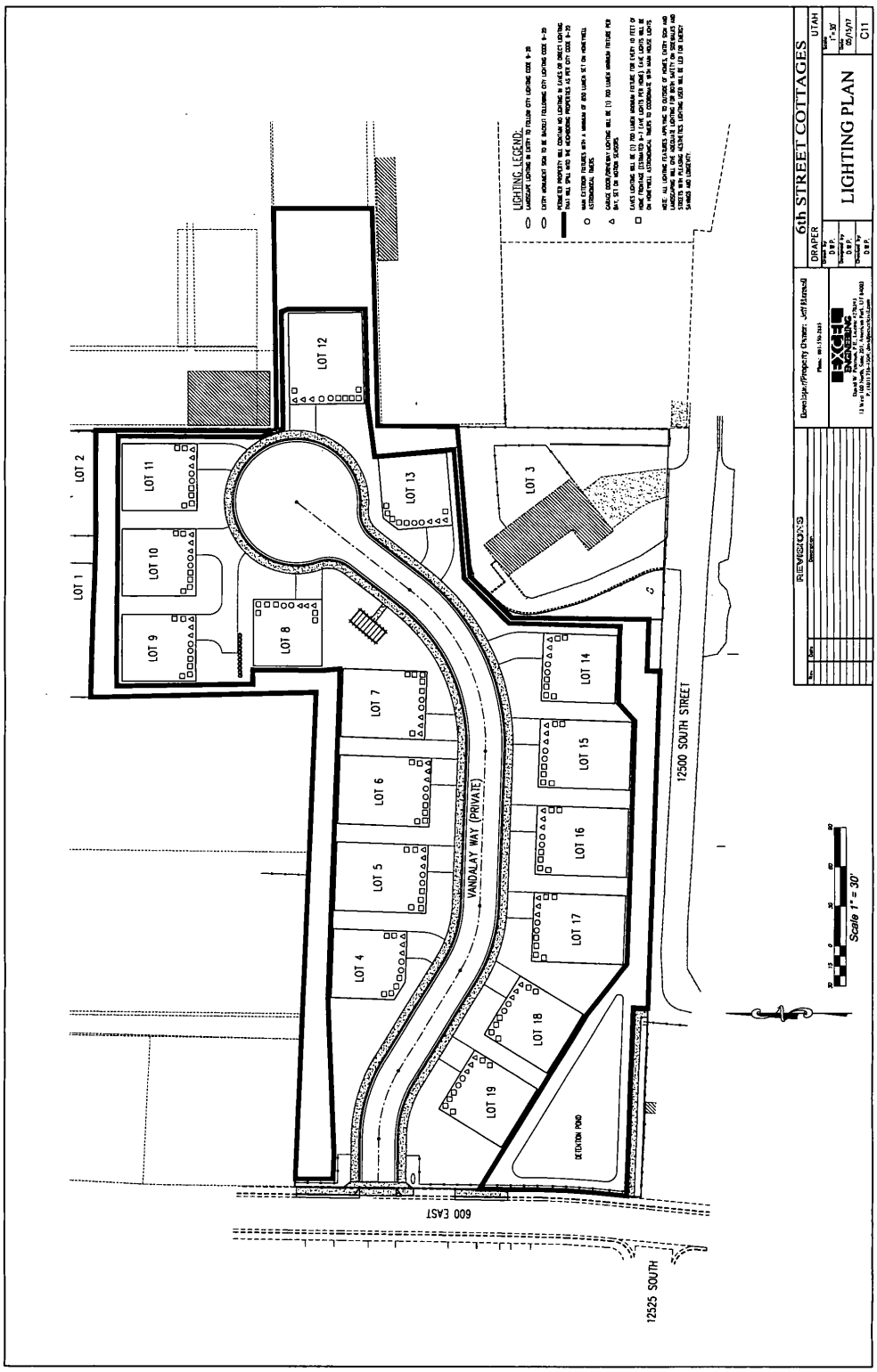
6th STREET COTTAGES

DRAPER UTAH

Drawn by: D.W.P.
Designed by: D.W.P.
Checked by: D.W.P.
Scale: 1"=30'
Date: 02/07/17

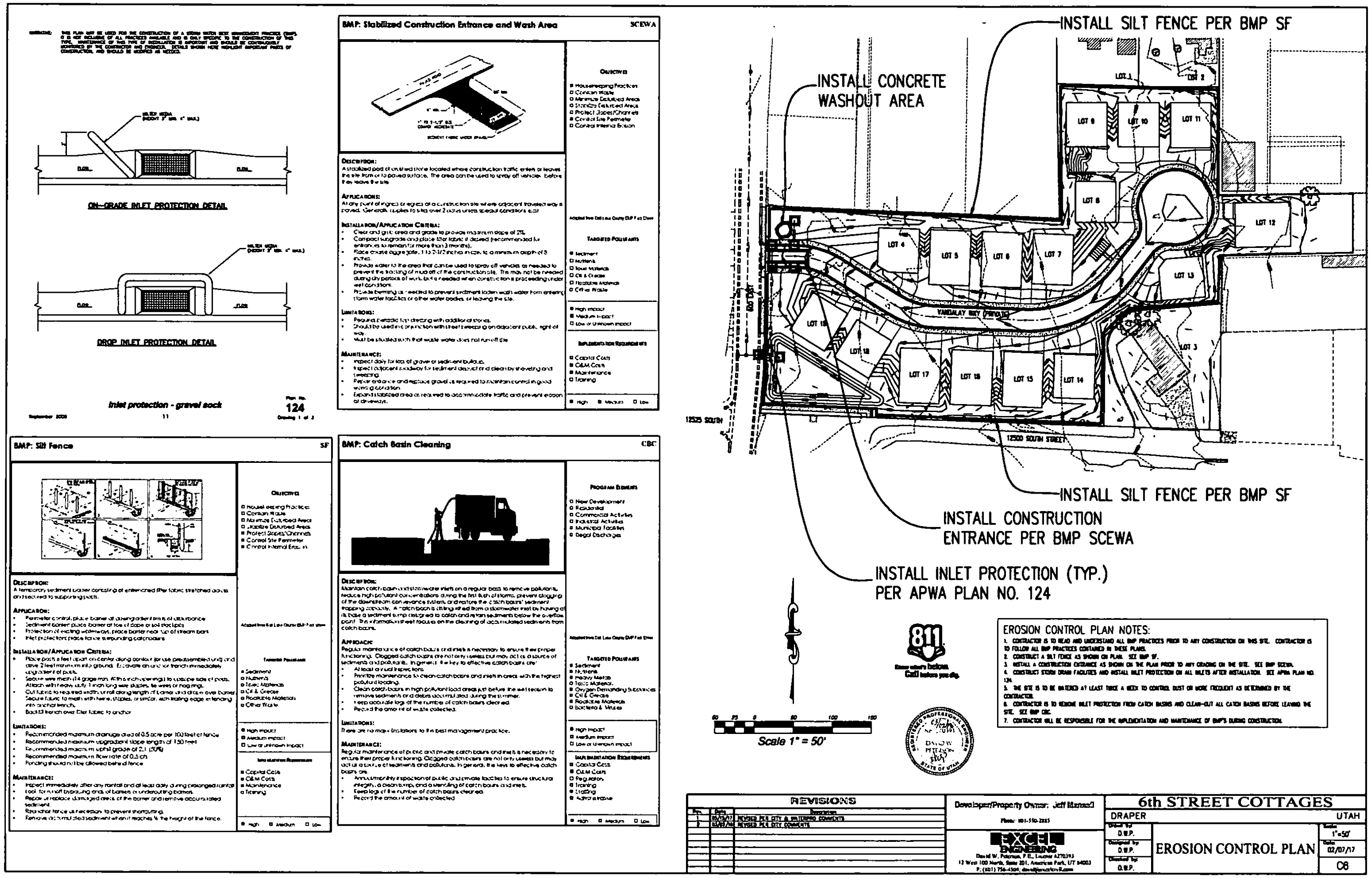
GRADING & DRAINAGE PLAN

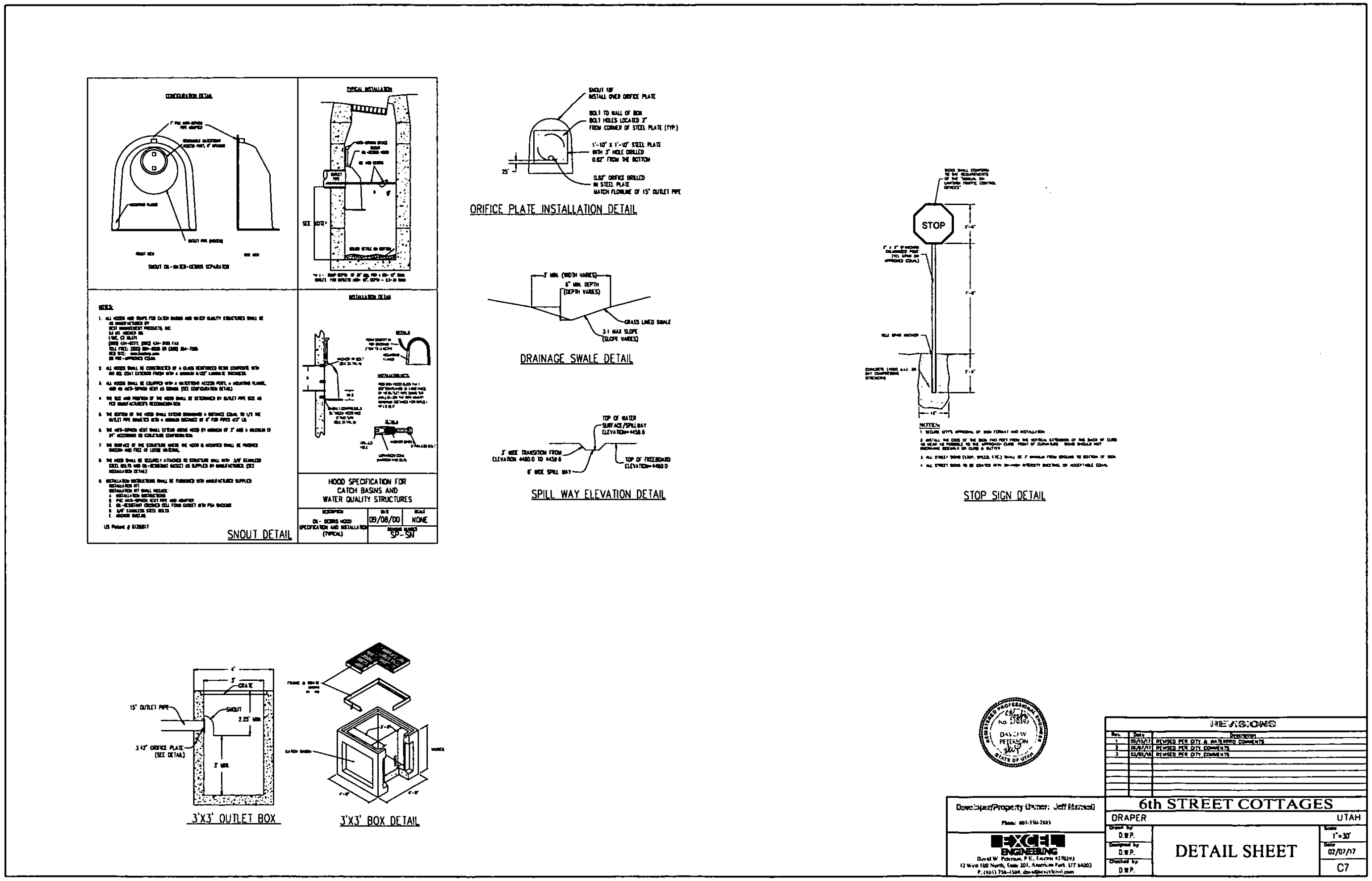
C3


LIGHTING LEGEND:
6th STREET COTTAGES
UTAH
DRAPER
LIGHTING PLAN
C11
LOT 1
LOT 2
LOT 3
LOT 4
LOT 5
LOT 6
LOT 7
LOT 8
LOT 9
LOT 10
LOT 11
LOT 12
LOT 13
LOT 14
LOT 15
LOT 16
LOT 17
LOT 18
LOT 19
DETENTION POND
VANDALAY WAY (PRIVATE)
12500 SOUTH STREET
600 EAST
12525 SOUTH
Scale 1" = 30'

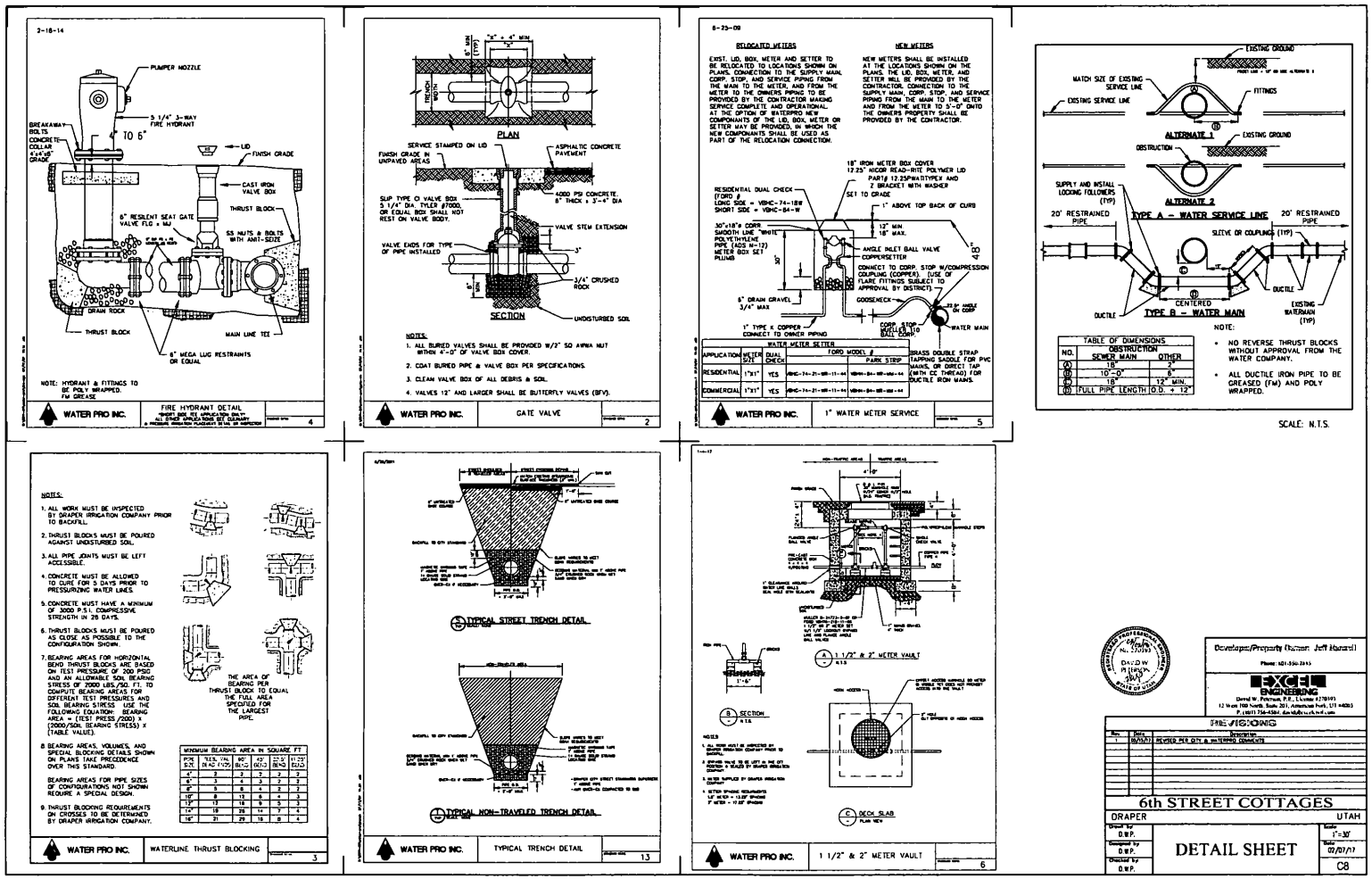
Long Term Stormwater BMP Details

Include all details of the Long Term Stormwater BMPs

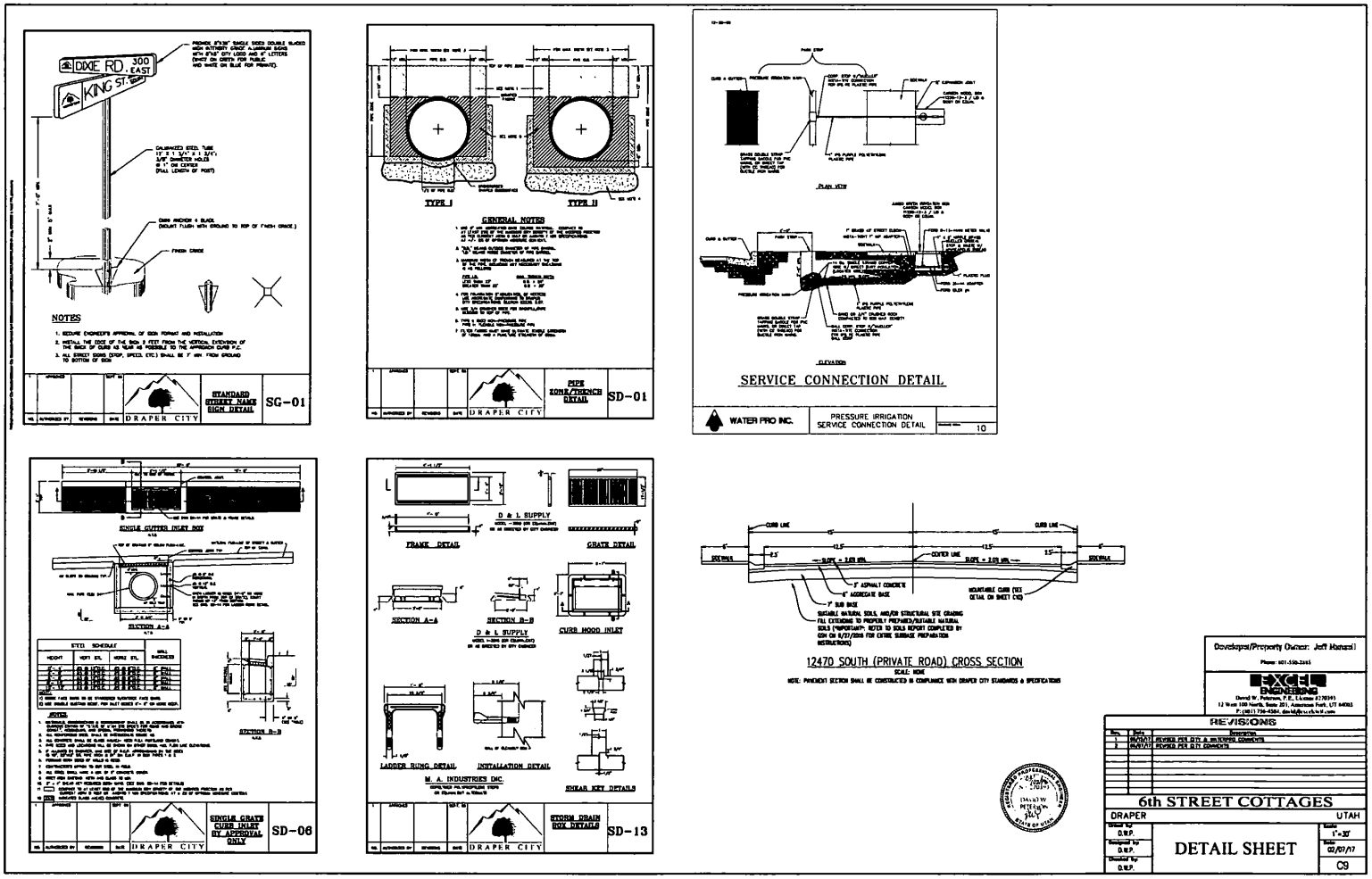

INSTALL SILT FENCE PER BMP SF
INSTALL CONCRETE WASHOUT AREA
INSTALL SILT FENCE PER BMP SF
INSTALL CONSTRUCTION ENTRANCE PER BMP SCEWA
INSTALL INLET PROTECTION (TYP.) PER APWA PLAN NO. 124
LOT 4
LOT 5
LOT 6
LOT 7
LOT 8
LOT 9
LOT 10
LOT 11
LOT 12
LOT 13
LOT 14
LOT 15
LOT 16
LOT 17
LOT 18
LOT 19
LOT 3
12500 SOUTH STREET
Scale 1" = 50'
EROSION CONTROL PLAN NOTES:
1. CONTRACTOR IS TO READ AND UNDERSTAND ALL BMP PRACTICES PRIOR TO ANY CONSTRUCTION ON THIS SITE. CONTRACTOR IS TO FOLLOW ALL BMP PRACTICES CONTAINED IN THESE PLANS.
2. CONSTRUCT A SILT FENCE AS SHOWN ON PLAN. SEE BMP SF.
3. INSTALL A CONSTRUCTION ENTRANCE AS SHOWN ON THE PLAN PRIOR TO ANY GRADING ON THE SITE. SEE BMP SCEWA.
4. CONSTRUCT STORM DRAIN FACILITIES AND INSTALL INLET PROTECTION ON ALL INLETS AFTER INSTALLATION. SEE APWA PLAN NO. 124.
5. THE SITE IS TO BE WATERED AT LEAST TWICE A WEEK TO CONTROL DUST OR MORE FREQUENT AS DETERMINED BY THE CONTRACTOR.
6. CONTRACTOR IS TO REMOVE INLET PROTECTION FROM CATCH BASINS AND CLEAN-OUT ALL CATCH BASINS BEFORE LEAVING THE SITE. SEE BMP CBC.
7. CONTRACTOR WILL BE RESPONSIBLE FOR THE IMPLEMENTATION AND MAINTENANCE OF BMP'S DURING CONSTRUCTION.
ON-GRADE INLET PROTECTION DETAIL
DROP INLET PROTECTION DETAIL
Inlet protection - gravel sock
124
BMP: Stabilized Construction Entrance and Wash Area
SCEWA
BMP: Silt Fence
SF
BMP: Catch Basin Cleaning
CBC
REVISIONS
Developer/Property Owner: Jeff Maxwell
EXCEL ENGINEERING
6th STREET COTTAGES
DRAPER
UTAH
EROSION CONTROL PLAN
C6



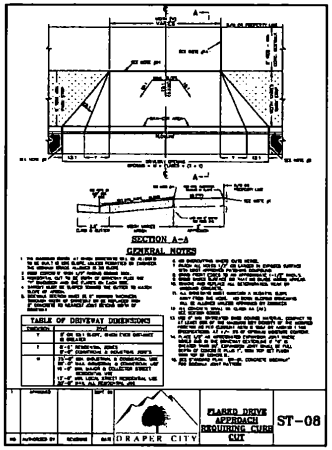
SNOUT DETAIL
HOOD SPECIFICATION FOR CATCH BASINS AND WATER QUALITY STRUCTURES
09/08/00
NONE
SP-SN
ORIFICE PLATE INSTALLATION DETAIL
DRAINAGE SWALE DETAIL
SPILL WAY ELEVATION DETAIL
STOP
STOP SIGN DETAIL
3'X3' OUTLET BOX
3'X3' BOX DETAIL
REVISIONS
6th STREET COTTAGES
DRAPER
UTAH
DETAIL SHEET
D.W.P.
1"=30'
02/07/17
C7
EXCEL ENGINEERING

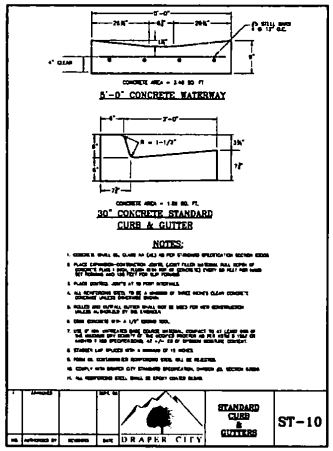


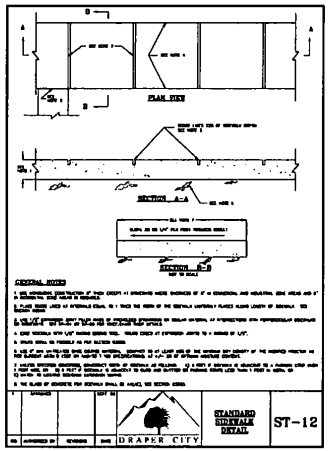
BK 10701 PG 2901

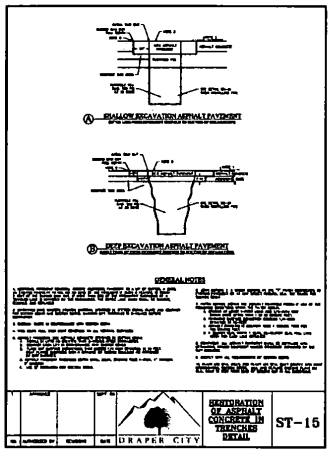


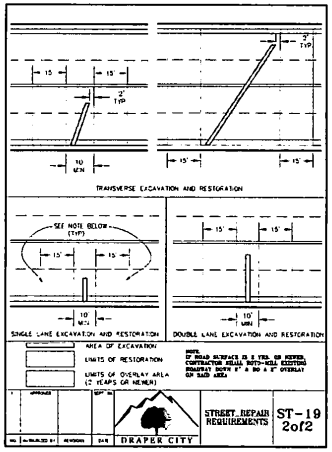
BK 10701 PG 2902

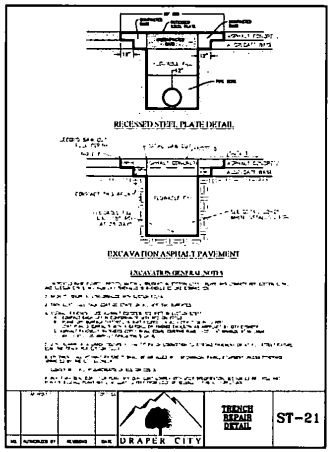


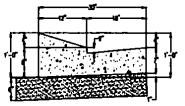












MOUNTABLE CURB DETAIL

Developer/Property Owner: Jeff Hansell
Phone: 801-550-2455
EXCEL ENGINEERING
David W. Peterson, P.E. Lic.No #276391
12 West 100 North, Suite 201, Anderson Park, UT 84003
P. (801) 756-0241, dwp@excelut.com

REVISIONS

No.	Date	Description
1	09/01/17	REVISED PER CITY & UNITYPRO COMMENTS

6th STREET COTTAGES

DRAPER UTAH

Drawn by: D.W.P.
Designed by: D.W.P.
Checked by: D.W.P.

DETAIL SHEET

Scale: 1"=30'
Date: 02/07/17
C10

BK 10701 PG 2903

accenaGroup TM
Engineering Storm Water Compliance

Dry Detention Ponds

Minimum Measure: Post-Construction Stormwater Management in New Development and Redevelopment

Subcategory: Retention/Detention

Description

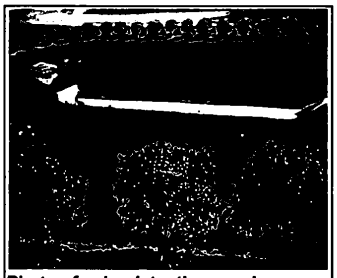


Photo of a dry detention pond designed to temporarily detain runoff during storm events.

Dry detention ponds (a.k.a. dry ponds, extended detention basins, detention ponds, extended detention ponds) are basins whose outlets have been designed to detain stormwater runoff for some minimum time (e.g., 24 hours) to allow particles and associated pollutants to settle. Unlike wet ponds, these facilities do not have a large permanent pool of water. However, they are often designed with small pools at the inlet and outlet of the basin. They can also be used to provide flood control by including additional flood detention storage.

Applicability

Dry detention ponds have traditionally been one of the most widely used stormwater best management practices. In some instances, these ponds may be the most appropriate best management practice. However, they should not be used as a one size fits all solution. If pollutant removal efficiency is an important consideration then dry detention ponds may not be the most appropriate choice. Dry detention ponds require a large amount of space to build them. In many instances, smaller-sized best management practices are more appropriate alternatives (see Grassed Swales, Infiltration Basin, Infiltration Trench, Porous Pavement, and Bioretention (Rain Gardens), Alternative Pavers, or Green Roofs.

Regional Applicability

Dry detention ponds can be applied in all regions of the United States. Some minor design modifications might be needed, however, in cold or arid climates or in regions with karst (i.e. limestone) topography.

Ultra-Urban Areas

Ultra-urban areas are densely developed urban areas in which little pervious surface is present. It is difficult to use dry detention ponds in the ultra-urban environment because of the land area each pond consumes.

Stormwater Hot Spots

Stormwater hot spots are areas where land use or activities generate highly contaminated runoff, with concentrations of pollutants in excess of those typically found in stormwater. Dry detention ponds can accept runoff from stormwater hot spots, but they need significant separation from ground water if they will be used for this purpose.

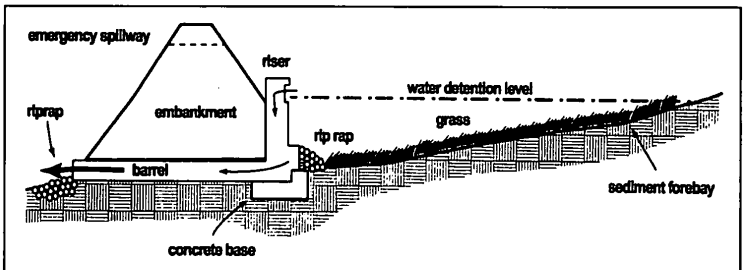
Stormwater Retrofit

A stormwater retrofit is a stormwater management practice (usually structural) put into place after development has occurred to improve water quality, protect downstream channels, reduce flooding, or meet other specific objectives. Dry detention ponds are useful stormwater retrofits, and they have two primary applications as a retrofit design. In many communities in the past, detention basins have been designed for flood control. It is possible to modify these facilities to incorporate features that encourage water quality control and/or channel protection. It is also possible to construct new dry ponds in open areas of a watershed to capture existing drainage.

Cold Water (Trout) Streams

A study in Prince George's County, Maryland, found that stormwater management practices can increase stream temperatures (Galli, 1990). Overall, dry detention ponds increased temperature by about 5°F. In cold water streams, dry ponds should be designed to detain stormwater for a relatively short time (i.e., less than 12 hours) to minimize the amount of warming that occurs in the practice. If the temperature of the water is a factor, then alternative best management practices may be more appropriate.

Siting and Design Considerations



Example profile view of a dry pond design.

Siting Considerations

Designers need to ensure that the dry detention pond is feasible at the site in question. This section provides basic guidelines for siting dry detention ponds.

Drainage Area

In general, dry detention ponds should be used on sites with a minimum area of 10 acres. On smaller sites, it can be challenging to provide channel or water quality control because the orifice diameter at the outlet needed to control relatively small storms becomes very small and thus prone to clogging. Low impact development techniques and on-lot treatment controls are recommended for smaller sites.

Slope

Dry detention ponds can be used on sites with slopes up to about 15 percent. The local slope needs to be

relatively flat, however, to maintain reasonably flat side slopes in the practice. There is no minimum slope requirement, but there does need to be enough elevation drop from the pond inlet to the pond outlet to ensure that flow can move through the system.

Soils / Topography

Dry detention ponds can be used with almost all soils and geology, with minor design adjustments for regions of karst topography or in rapidly percolating soils such as sand. In these areas, extended detention ponds should be designed with an impermeable liner to prevent ground water contamination or sinkhole formation.

Ground Water

Except for the case of hot spot runoff, the only consideration regarding ground water is that the base of the extended detention facility should not intersect the ground water table. A permanently wet bottom may become a mosquito breeding ground. Research in Southwest Florida (Santana et al., 1994) demonstrated that intermittently flooded systems, such as dry extended detention ponds, produced more mosquitoes than other pond systems, particularly when the facilities remained wet for more than 3 days following heavy rainfall.

Design Considerations

Specific designs may vary considerably, depending on site constraints or preferences of the designer or community. Some features, however, should be incorporated into most dry extended detention pond designs. These design features can be divided into five basic categories: pretreatment, treatment, conveyance, maintenance reduction, and landscaping.

Pretreatment

Pretreatment incorporates design features that help to settle out coarse sediment particles. By removing these particles from runoff before they reach the large permanent pool, the maintenance burden of the pond is reduced. In ponds, pretreatment is achieved with a sediment forebay, which is a small pool (typically about 10 percent of the volume of water to be treated for pollutant removal).

Treatment

Treatment design features help enhance the ability of a stormwater management practice to remove pollutants. Designing dry ponds with a high length-to-width ratio (i.e., at least 1.5:1) and incorporating other design features to maximize the flow path effectively increases the detention time in the system by eliminating the potential of flow to short-circuit the pond. Designing ponds with relatively flat side slopes can also help to lengthen the effective flow path. Finally, the pond should be sized to detain the volume of runoff to be treated for between 12 and 48 hours.

Conveyance

Conveyance of stormwater runoff into and through the dry pond is a critical component. Stormwater should be conveyed to and from dry ponds safely in a manner that minimizes erosion potential. The outfall of pond systems should always be stabilized to prevent scour. To convey low flows through the system, designers should provide a pilot channel. A pilot channel is a surface channel that should be

used to convey low flows through the pond. In addition, an emergency spillway should be provided to safely convey large flood events. To help mitigate the warming of water at the outlet channel, designers should provide shade around the channel at the pond outlet.

Maintenance Reduction

Regular maintenance activities are needed to maintain the function of stormwater practices. In addition, some design features can be incorporated to ease the maintenance burden of each practice. In dry detention ponds, a "micropool" at the outlet can prevent resuspension of sediment and outlet clogging. A good design includes maintenance access to the forebay and micropool.

Another design feature that can reduce maintenance needs is a non-clogging outlet. Typical examples include a reverse-slope pipe or a weir outlet with a trash rack. A reverse slope pipe draws from below the permanent pool extending in a reverse angle up to the riser and determines the water elevation of the micropool. Because these outlets draw water from below the level of the permanent pool, they are less likely to be clogged by floating debris.

Landscaping

Designers should maintain a vegetated buffer around the pond and should select plants within the extended detention zone (i.e., the portion of the pond up to the elevation where stormwater is detained) that can withstand both wet and dry periods. The side slopes of dry ponds should be relatively flat to reduce safety risks.

Design Variations

Tank Storage

Another variation of the dry detention pond design is the use of tank storage. In these designs, stormwater runoff is conveyed to large storage tanks or vaults underground. This practice is most often used in the ultra-urban environment on small sites where no other opportunity is available to provide flood control. Tank storage is provided on small areas because underground storage for a large drainage area would generally be costly. Because the drainage area contributing to tank storage is typically small, the outlet diameter needed to reduce the flow from very small storms would very small. A very small outlet diameter, along with the underground location of the tanks, creates the potential for debris being caught in the outlet and resulting maintenance problems. Since it is necessary to control small runoff events (such as the runoff from a 1-inch storm) to improve water quality, it is generally infeasible to use tank storage for water quality and generally impractical to use it to protect stream channels.

Regional Variations

Arid or Semi-Arid Climates

In arid and semi-arid regions, some modifications might be needed to conserve scarce water resources. Any landscaping plans should prescribe drought-tolerant vegetation wherever possible. In addition, the wet forebay can be replaced with an alternative dry pretreatment, such as a detention cell. In regions with a distinct wet and dry season, as in many arid regions, regional detention ponds can possibly be used as a recreation area such as a ball field during the dry season.

Cold Climates

In cold climates, some additional design features can help to treat the spring snowmelt. One such modification is to increase the volume available for detention to help treat this relatively large runoff event. In some cases, dry facilities may be an option as a snow storage facility to promote some treatment of plowed snow. If a pond is used to treat road runoff or is used for snow storage, landscaping should incorporate salt-tolerant species. Finally, sediment might need to be removed from the forebay more frequently than in warmer climates (see Maintenance Considerations for guidelines) to account for sediment deposited as a result of road sanding.

Limitations

Although dry detention ponds are widely applicable, they have some limitations that might make other stormwater management options preferable:

Dry detention ponds have only moderate pollutant removal when compared to other structural stormwater practices, and they are ineffective at removing soluble pollutants (See Effectiveness).

Dry extended detention ponds may become a nuisance due to mosquito breeding if improperly maintained or if shallow pools of water form for more than 7 days.

Although wet ponds can increase property values, dry ponds can actually detract from the value of a home (see Cost Considerations).

Dry detention ponds on their own only provide peak flow reduction and do little to control overall runoff volume, which could result in adverse downstream impacts.

Maintenance Considerations

In addition to incorporating features into the pond design to minimize maintenance, some regular maintenance and inspection practices are needed. Table 1 outlines some of these practices.

Table 1. Typical maintenance activities for dry ponds (Source: Modified from WMI, 1997)

Activity	Schedule
Note erosion of pond banks or bottom	Semiannual inspection
Inspect for damage to the embankment Monitor for sediment accumulation in the facility and forebay Examine to ensure that inlet and outlet devices are free of debris and operational	Annual inspection
Repair undercut or eroded areas Mow side slopes Manage pesticide and nutrients Remove litter and debris	Standard maintenance
Seed or sod to restore dead or damaged ground	Annual

cover	maintenance (as needed)
Remove sediment from the forebay	5- to 7-year maintenance
Monitor sediment accumulations, and remove sediment when the pond volume has been reduced by 25 percent	25- to 50-year maintenance

Effectiveness

Structural management practices can be used to achieve four broad resource protection goals: flood control, channel protection, ground water recharge, and pollutant removal. Dry detention basins can provide flood control and channel protection, as well as some pollutant removal.

Flood Control

One objective of stormwater management practices can be to reduce the flood hazard associated with large storm events by reducing the peak flow associated with these storms. Dry extended detention basins can easily be designed for flood control, and this is actually the primary purpose of most detention ponds.

Channel Protection

One result of urbanization is the geomorphic changes that occur in response to modified hydrology. Traditionally, dry detention basins have provided control of the 2-year storm (i.e., the storm that occurs, on average, once every 2 years) for channel protection. It appears that this control has been relatively ineffective, and research suggests that control of a smaller storm might be more appropriate (MacRae, 1996). Slightly modifying the design of dry detention basins to reduce the flow of smaller storm events might make them effective tools in reducing downstream erosion.

Pollutant Removal

Dry detention basins provide moderate pollutant removal, provided that the design features described in the Siting and Design Considerations section are incorporated. Although they can be effective at removing some pollutants through settling, they are less effective at removing soluble pollutants because of the absence of a permanent pool. A few studies are available on the effectiveness of dry detention ponds. Typical removal rates, as reported by Schueler (1997), are as follows:

Total suspended solids: 61%

Total phosphorus: 19%

Total nitrogen: 31%

Nitrate nitrogen: 9%

Metals: 26%-54%

There is considerable variability in the effectiveness of ponds, and it is believed that properly designing and maintaining ponds may help to improve their performance. The siting and design criteria presented in this sheet reflect the best current information and experience to improve the performance of wet ponds. A joint project of the American Society of Civil Engineers (ASCE) and the USEPA Office of Water might help to isolate specific design features that can improve performance. The National Stormwater Best Management Practice (BMP) database is a compilation of stormwater practices that includes both design information and performance data for various practices. As the database expands, inferences about the extent to which specific design criteria influence pollutant removal may be made. For more information on this database, access the BMP database [EXIT Disclaimer].

Cost Considerations

The construction costs associated with dry detention ponds range considerably. One recent study evaluated the cost of all pond systems (Brown and Schueler, 1997). Adjusting for inflation, the cost of dry extended detention ponds can be estimated with the equation

$C = 12.4V^{0.760}$

where:

C = Construction, design, and permitting cost, and

V = Volume needed to control the 10-year storm (ft^3).

Using this equation, typical construction costs are

$ 41,600 for a 1 acre-foot pond

$ 239,000 for a 10 acre-foot pond

$ 1,380,000 for a 100 acre-foot pond

Interestingly, these costs are generally slightly higher than the cost of wet ponds on a cost per total volume basis. Dry detention ponds are generally less expensive on a given site, because they are usually smaller than a wet pond design.

Ponds do not consume a large area compared to the total area treated (typically 2 to 3 percent of the contributing drainage area). It is important to note, however, that each pond is generally large. Other practices, such as filters or swales, may be "squeezed in" on relatively unusable land, but ponds need a relatively large continuous area.

For ponds, the annual cost of routine maintenance is typically estimated at about 3 to 5 percent of the construction cost. Alternatively, a community can estimate the cost of the maintenance activities outlined in the maintenance section. Finally, ponds are long-lived facilities (typically longer than 20 years). Thus, the initial investment into pond systems can be spread over a relatively long time period.

Another economic concern associated with dry ponds is that they might detract slightly from the value of

adjacent properties. One study found that dry ponds can actually detract from the perceived value of homes adjacent to a dry pond by between 3 and 10 percent (Emmerling-Dinovo, 1995).

References

Design References:

Denver Urban Drainage and Flood Control District. 1992. *Urban Storm Drainage Criteria Manual-Volume 3: Best Management Practices*. Denver, CO.

Watershed Management Institute (WMI). 1997. *Operation, Maintenance, and Management of Stormwater Management Systems*. Prepared for U.S. Environmental Protection Agency, Office of Water. Washington, DC.

Other References:

Brown, W., and T. Schueler. 1997. *The Economics of Stormwater BMPs in the Mid-Atlantic Region*. Prepared for Chesapeake Research Consortium. Edgewater, MD. Center for Watershed Protection. Ellicott City, MD.

Emmerling-Dinovo, C. 1995. Stormwater Detention Basins and Residential Locational Decisions. *Water Resources Bulletin* 31(3): 515-521

Galli, J. 1990. *Thermal Impacts Associated with Urbanization and Stormwater Management Best Management Practices*. Metropolitan Washington Council of Governments. Prepared for Maryland Department of the Environment, Baltimore, MD.

MacRae, C. 1996. Experience from Morphological Research on Canadian Streams: Is Control of the Two-Year Frequency Runoff Event the Best Basis for Stream Channel Protection? In *Effects of Watershed Development and Management on Aquatic Ecosystems*. American Society of Civil Engineers. Edited by L. Roesner. Snowbird, UT. pp. 144-162.

Santana, F., J. Wood, R. Parsons, and S. Chamberlain. 1994. *Control of Mosquito Breeding in Permitted Stormwater Systems*. Prepared for Southwest Florida Water Management District, Brooksville, FL.

Schueler, T. 1997. Influence of Ground Water on Performance of Stormwater Ponds in Florida. *Watershed Protection Techniques* 2(4):525-528.

Information Resources

Center for Watershed Protection (CWP), Environmental Quality Resources, and Loiederman Associates. 1997. *Maryland Stormwater Design Manual*. Draft. Prepared for Maryland Department of the Environment, Baltimore, MD.

Center for Watershed Protection (CWP). 1997. *Stormwater BMP Design Supplement for Cold Climates*. Prepared for U.S. Environmental Protection Agency, Office of Wetlands, Oceans and Watersheds. Washington, DC.

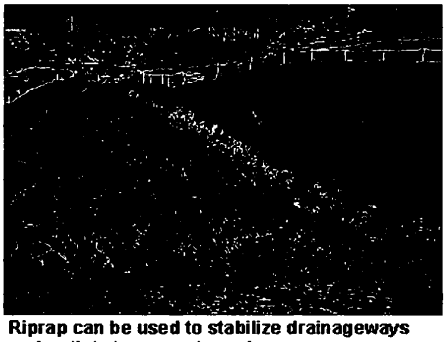
U.S. Environmental Protection Agency (USEPA). 1993. *Guidance Specifying Management Measures for*

Sources of Nonpoint Pollution in Coastal Waters. EPA-840-B-92-002. U.S. Environmental Protection Agency, Office of Water, Washington, DC.

Riprap

Minimum Measure: Construction Site Stormwater Runoff Control

Subcategory: Erosion Control



Riprap can be used to stabilize drainageways and outlets to prevent erosion

Description

Riprap is a layer of large stones used to protect soil from erosion in areas of concentrated runoff. Riprap can also be used on slopes that are unstable because of seepage problems.

Applicability

Use riprap to stabilize cut-and-fill slopes; channel side slopes and bottoms; inlets and outlets for culverts, bridges, slope drains, grade stabilization structures, and storm drains; and streambanks and grades.

Siting and Design Considerations

Riprap can be unstable on very steep slopes, especially when rounded rock is used. For slopes steeper than 2:1, consider using materials other than riprap for erosion protection.

Consider the following design recommendations for riprap installation (Smolen et al., 1988):

Gradation. Use a well-graded mixture of rock sizes instead of one uniform size.
Quality of stone. Use riprap material that is durable so that freeze and thaw cycles do not decompose it in a short time; most igneous stones, such as granite, have suitable durability.
Riprap depth. Make the riprap layer at least two times as thick as the maximum stone diameter.
Filter material. Apply a filter material--usually a synthetic cloth or a layer of gravel--before applying the riprap. This prevents the underlying soil from moving through the riprap.
Riprap Limits. Place riprap so it extends to the maximum flow depth, or to a point where

vegetation will be satisfactory to control erosion.

Curves. Ensure that riprap extends to five times the bottom width upstream and downstream of the beginning and ending of the curve and the entire curved section.

Riprap Size. The size of the riprap material depends on the shear stress of the flows the riprap will be subject to, but it ranges from an average size of 2 inches to 24 inches in diameter (Idaho Department of Environmental Quality, no date).

Wire Riprap Enclosures. Consider using chain link fencing or wire mesh to secure riprap installations, especially on steep slopes or in high flow areas.

Limitations

The steepness of the slope limits the applicability of riprap, because slopes greater than 2:1 can cause riprap loss due to erosion and sliding. If used improperly, riprap can actually increase erosion. In addition, riprap can be more expensive than other stabilization options.

Maintenance Considerations

Inspect riprap areas annually and after major storms. If riprap has been damaged, repair it promptly to prevent a progressive failure. If repairs are needed repeatedly at a location, evaluate the site to determine if the original design conditions have changed. Also, you might need to control weed and brush growth in some locations.

Effectiveness

When properly designed and installed, riprap can prevent erosion from the protected area.

Cost Considerations

The cost of riprap varies depending on location and the type of material selected. A cost of $35 to $50 per square yard of nongrouted riprap has been reported, while grouted riprap ranges from $45 to $60 per square yard (1993 dollars; Mayo et al., 1993).

References

FHWA (Federal Highway Administration). 1995. *Best Management Practices for Erosion and Sediment Control*. FHWA-SLP-94-005. Federal Highway Administration, Sterling, VA.

Idaho Department of Environmental Quality. No date. *Catalog of Stormwater BMPs for Cities and Counties: BMP #20 - Riprap Slope and Outlet Protection.* http://www.deq.state.id.us/water/data_reports/storm_water/catalog/sec_2/bmps/5.pdf. Accessed May 10, 2006.

Mayo, L., D. Lehman, L. Olinger, B. Donavan, and P. Mangarella. 1993. *Urban BMP Cost and Effectiveness Summary Data for 6217(g) Guidance: Erosion and Sediment Control During Construction.* Woodward-Clyde Consultants.

MPCA (Minnesota Pollution Control Agency). 1998. *Protecting Water Quality in Urban Areas*. Minnesota Pollution Control Agency, Division of Water Quality, St. Paul, MN.

Smolen, M.D., D.W. Miller, L.C. Wyatt, J. Lichthardt, and A.L. Lanier. 1988. *Erosion and Sediment Control Planning and Design Manual.* North Carolina Sedimentation Control Commission; North Carolina Department of Environment, Health, and Natural Resources; and Division of Land Resources Land Quality Section, Raleigh, NC.

SWRPC (Southeast Wisconsin Regional Planning Commission). 1991. *Costs of Urban Nonpoint Source Water Pollution Control Measures.* Technical Report No. 31. Southeast Wisconsin Regional Planning Commission, Waukesha, WI.

Exhibit C: Inspections/Maintenance

Inspections will be located on complianceGO

1. Inspections will be performed by:

   Name: A qualified inspector from accenaGroup

   Title: CISEC

   Company: accenaGroup

   Telephone Number: 801-701-6188

   Email: support@accenagroup.com

2. Maintenance will be performed by:

   Name: A qualified inspector from accenaGroup

   Title: CISEC

   Company: accenaGroup

   Telephone Number: 801-701-6188

   Email: support@accenagroup.com

3. Long Term Stormwater BMPs need to be inspected by a qualified person during installation to ensure the control is properly installed. This will be performed by a qualified person from the City or the design engineer.

4. List below the schedule for inspections of each of the BMPs listed in Exhibit B:

List of BMPs	Describe the inspection and maintenance schedule
Winter Snow and Ice Controls and Salt Storage	Weekly during winter months, and once annually in the spring during cleanup (after termination of snow conditions)
Trash and Debris	Twice Annually
Mulches and Soils	Twice Annually
Mowing and Trimming	Walkthrough and cleanup following regular maintenance
Leaves – Autumn Cleanup	Once annually, in the fall (prior to cold weather conditions)
Fertilizer	Walkthrough and cleanup following each application
Storm Inlets	Twice Annually
Cleanout box	Twice Annually
Detention Pond/Riprap	Twice Annually
Pergola structure	Twice Annually
Fencing/Retaining wall	Twice annually

Inspection Report

Site Name:	Date of Evaluation	
Site Address:		

Facility Contact information			
	NAME and MAILING ADDRESS	Phone	E- MAIL ADDRESS
SITE CONTACT:			
INSPECTOR CONTACT:			

Controls Inspected:

Are SOP's for Stormwater Post Construction Inspections implemented and available for review? YES NO
Circle Answer

Orifice Required forsite YES NO Orifice Size: Hooded outlet cover (snout) Required forsite YES NO
Circle Answers

Items Inspected	Checked		Maintenance Required?		Is there excessive accumulation of		Observations and Remarks
	Yes	No	Yes	No	Yes	No	
1. Dumping Evidence							
2. Spill Evidence							
3.General Site Exposure							
4. Other Pollution Sources							
5. Stormwater Storage condition and capacity (detention/retention ponds)							
6. Inlets and catch basins							
7. Conveyance System							
8. Manholes							
9. Parking							
10. Waste Collection							
11. Landscaping							
12. Pre-Treatment devices							
13. Sumps							
14. Flow Control devices							
15. Site Specific SOP Items							
16. Other							

Notes:

Print Name:	Date:
Signature:	Title or Position

BMP Measurement Log

These logs are for BMPs that depend on measurement for cleanout and for Stormwater capacity.

Control Name and Number	Date	Inspection Method	Result

Common Pollutants from Stormwater Discharges

Pollutants	Sources	Consequences of Pollutant
Sediment	Erosion or soils that are not stabilized.	Destruction of aquatic habitat for fish and plants, transportation of attached oils, nutrients and other chemical contamination, increased flooding. Sediment can transport other pollutants that are attached to it including nutrients, trace metals, and hydrocarbons. Sediment is the primary component of total suspended solids (TSS), a common water quality analytical parameter.
Nutrients (Phosphorus, Nitrogen Potassium, Ammonia)	Fertilizers; Plant Debris (grass clippings, leaves); Animal Waste; Sediment	Harmful algal blooms, reduced oxygen in the water, changes in water chemistry and pH. Nutrients can result in excessive or accelerated growth of vegetation, resulting in impaired use of water in lakes and other receiving waters.
Hydrocarbons (Petroleum Products, Benzene, Toluene, Ethyl benzene, Xylene)	Oils; Gasoline; Diesel Fuel; Antifreeze; Plant and Animal Oils;	These pollutants are toxic to humans and wildlife at very low levels. Carcinogenic. Teratogenic.
Heavy Metals	Manufacturing; Industrial Wastes; Vehicles and Equipment; Storage; Batteries; Paints	Metals including lead, zinc, cadmium, copper, chromium and nickel are commonly found in storm water. Metals are of concern because they are toxic to all life at very low levels. Carcinogenic. Teratogenic
Toxic Chemicals (Chlorides) – including Pesticides & Herbicides, Detergents, Soaps	Industrial Chemicals; Pesticides; Herbicides; Detergents; Soaps;	Chemicals are of concern because they are toxic to all life at very low levels. Carcinogenic. Teratogenic.
Trash, Debris, Solids	Wastes	Aesthetically unpleasant. Risk of decay product toxicity. Risk of aquatic animal entrapment or ingestion and death.
Pathogens – Bacteria and Viruses	Animal Waste; Human Waste	Human health risks due to disease and toxic contamination of aquatic life.
Salt	Salt Piles; Car Washing; Snow Removal	Salt can infiltrate into groundwater and contaminate it. Vegetation is damage or killed by salt causing oxygen to be taken out of the water. Aquatic life can be killed or have stunted growth due to salt. Salt also traps food and nutrients preventing fish and animal life from accessing those nutrients
Temperature (Thermal Pollution)	Industrial Waste Water; Removal of Vegetation near streams; lack of vegetation surrounding roads and parking lots	High water temperatures can kill or harm cold water fish. This occurs by slowing of metabolism in fish which causes malnutrition; oxygen depletion in the water; forced migration of the aquatic life

LTSMP Certification

LTSMP Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: GarrettDaw Title: Manager

Signature: GarrettDaw (May 15, 2018) Date: May 15, 2018

Company: Daw Construction

Facility: 6th Street Cottages

Amendment Log

Date	Description of the Amendment	PCMP Section	Amendment Prepared by

Training Log

Date	Description of the Training	Attendees Name

Exhibit D: Annual report

Site Name:		Annual Report for Dates:	
Site Address:			
Facility Contact Information			
	NAME and MAILING ADDRESS	Phone	E- MAIL ADDRESS
SITE CONTACT:			
INSPECTOR CONTACT:			

Inspection Dates:				
1st Inspection	2nd Inspection	3rd Inspection	4th Inspection	5th Inspection

Pollutants Found:	Found During Inspection #:	How were Pollutants controlled/disposed?

Are Controls Functioning Properly?	Yes	No

Notes:

Print Name:	Date:
Signature:	Title or Position

*Include Training Logs and Inspection Reports with Annual Report when submitting.